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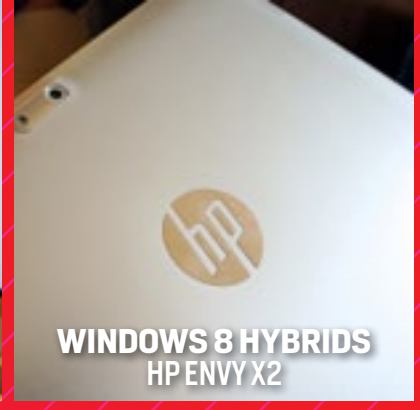

WINDOWS 8 HYBRIDS
HP ENVY X2

SINGULAR STANDOUTS
SAMSUNG GALAXY CAMERA

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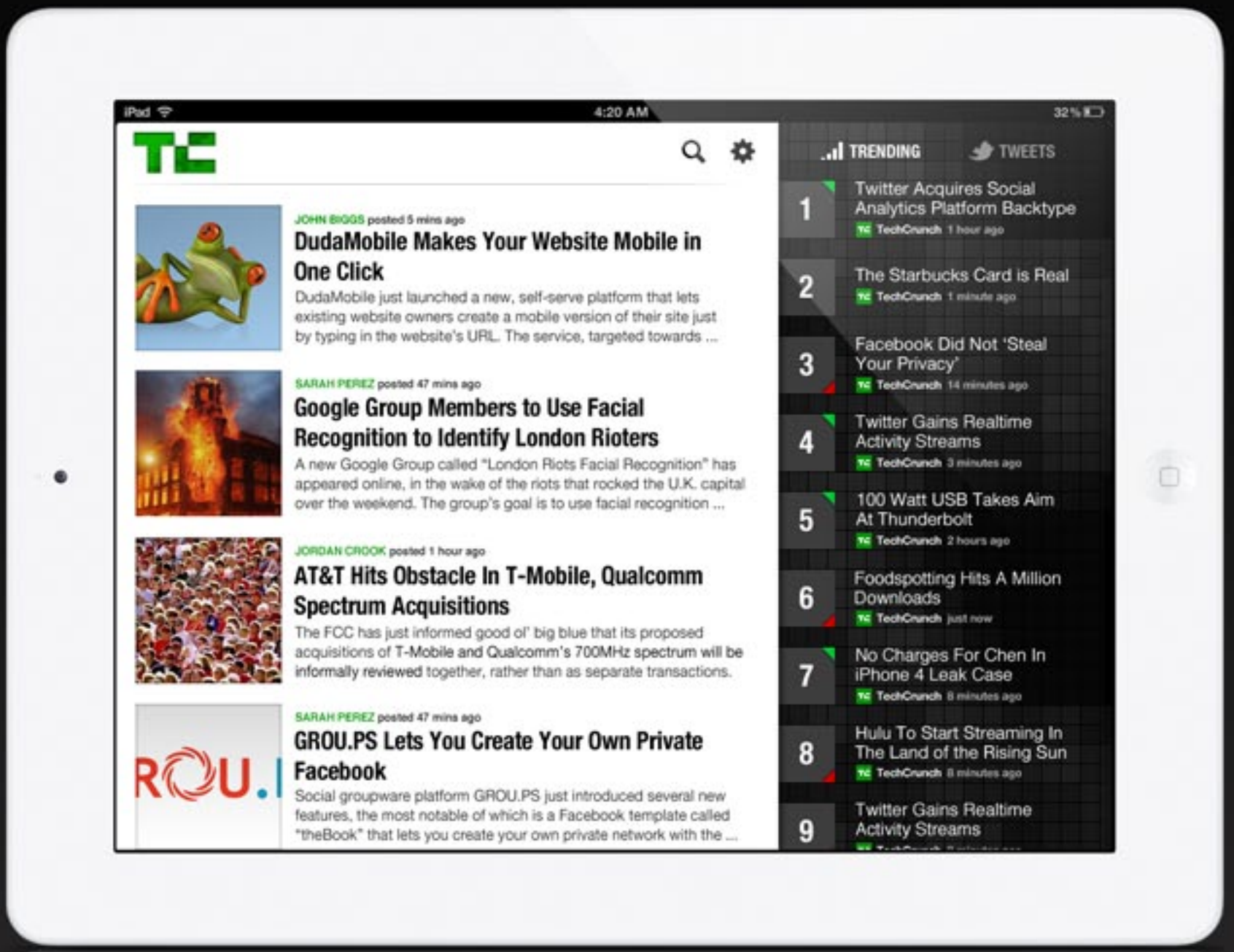

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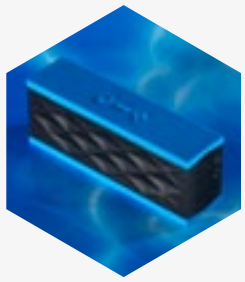

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SO MANY CHOICES

EDITOR'S LETTER

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If you weren't having a hard enough time choosing your next smartphone or tablet, the unveiling of five separate world-class phones this week plus three very affordable tablets might just have made that process a lot more difficult. That is, of course, unless you're a happy iOS user. Apple confirmed that its next big media event will indeed take place in San Francisco on September 12th, so if you've been waiting for the next iPhone, that wait should be almost over.

But, for the Android faithful, or the Windows Phone curious, you now have a lot of great new devices to choose from thanks to back-to-back events from Nokia and Motorola this week. It was Nokia that went first, augmenting its Lumia line with two new models. First is the 4.3-inch Lumia 820, what looks to be a spiritual successor to the 710, powered by a dual-core 1.5GHz Snapdragon S4 processor backed by 1GB RAM and, unfortunately, still just WVGA resolution.

That device looks nice, but the 920 is the one Nokia spent 95 percent of its event talking about. This guy clearly is an extension of the 900 design language, featuring a 4.5-inch WXGA (1,280 x 768) curved glass display and an 8-megapixel PureView camera in the back. No, this isn't the same system that we saw in the 808 PureView, it's a wholly new sensor that's entirely suspended on a series of tiny springs to dramatically reduce camera shake.

Nokia's SVP Kevin Shields told me the system is a "minor mechanical miracle" while espousing its virtues, but that didn't stop plenty of pundits online from decrying the death of the PureView name, which has only previously been seen in the 808. Instead, Shields believes it needs to be seen as a broader term, a label that will only be applied to imaging devices that feature some sort of breakthrough technology. We'll see whether that plays out going forward.

Sadly Nokia had neither prices nor availability to share with us at this event, leaving us guessing when and how much these will cost. A safe guess is $199 for the 820 and $299 for the 920, but I wouldn't be surprised to see them each $100 cheaper. We've been hearing Windows Phone 8 will launch on October 29th, so expect these to hit retail around then, and our sources at Verizon have said the 820 at least has already shown up in inventory systems. So, hopefully

EDITOR'S LETTER

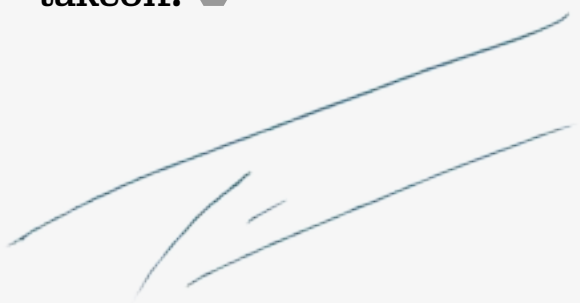
widespread carrier availability won't be such a problem for Nokia this time around.

At the Motorola event, just a few hours later, we saw a trio of new devices that all impressed in some way or another. First was the 4.3-inch Droid RAZR M, featuring a qHD (960 x 540) Super AMOLED display, 8GB of storage (with microSD expansion) and a price of just $99 on contract. The next step up is the 4.7-inch RAZR HD, with a 720p Super AMOLED HD display (yes, it's PenTile), 1.5GHz S4 processor and a hulking 2,530mAh battery. That's quite big, but if it isn't enough there's the RAZR Maxx HD, which features the same specs as the HD but is ever so slightly thicker to make room for a 3,300mAh battery that promises 21 hours of talk time. Yes, you could talk for almost a *full day* on a single charge.

All are Verizon exclusives and all are a bit on the heavy side, but that heft imparts a feeling of solidity. They have similar styling to the RAZR that came before, offering a soft-touch Kevlar backing and metal construction. Sadly no pricing on the HD or Maxx, but it's fair to assume $199 and $299, and it's fair to be disappointed that these devices won't be shipping until later in the year. All, that is, except for the M, which hits Verizon stores next week and is up for pre-order now.

Finally, just as we are going to press, Amazon had its own event where it unveiled a fully new E Ink reader and a trio of new tablets. The reader is the new Kindle Paperwhite, with an illuminating screen (à la the latest Nook), a much higher-resolution display — and a price of just $119. Then there's the new Kindle Fire 2012, which is faster than the old one, but cheaper, down to $159. Finally, two Kindle Fire HD models were announced, a 7-inch and an 8.9-inch version. The former is just $199 while the latter is $100 more, but it'll cost you $499 if you want AT&T's 4G LTE built in. That may sound like a lot, but Amazon has negotiated a killer data deal where you can pay $50 a year for 250MB a month. I, for one, will be pre-ordering a Paperwhite posthaste.

In this week's Distro we're bringing you our first impressions of those new Nokia and Motorola smartphones. For reviews, our Zach Honig takes a look at Canon's massive EOS-1D X DSLR, while Brian Heater examines the (now somewhat dated-looking) Sony Reader PRS-T2. We have a new IRL, more Recommended Reading and Jonathan "Jonti" Picking (aka Weebl) was kind enough to do Q&A. Joshua Fruhlinger's This is the Modem World talks about appropriate smartphone use and we'll be taking you to Berlin for a look at the best of IFA. Now, please put your seat into a relaxed and unlocked position and prepare for takeoff. D



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

ENTER

EYES-ON

DISTRO
09.07.12

JAWBONE JAMBOX REMIX

A COLORFUL REBOOT

Sure, you've seen the regular ol' red, white, black and blue offerings that the first wave of Jawbone's smaller Jambox hit stores with. Now, the outfit has unleashed hues with 117 possible color combinations for the wireless, portable audio kit. The Bluetooth speaker is now an even bolder piece of eye candy — on the outside, at least.

THE DAMAGE:

$200

PHOTOGRAPHS BY WILL LIPMAN

NOKIA LUMIA 920

Click on product names to read full stories

PRICING: TBD

AVAILABILITY: Q4 2012

THE BREAKDOWN: SPORTING A NEW GLOSS COATING AND PUREVIEW TECH, THE 920'S INTERNALS ARE STILL TOP-NOTCH.

Nokia's taken the wraps off its worst-kept Windows Phone 8 secret: the Lumia 920. With a dual-core 1.5GHz Snapdragon S4 CPU, a "better than HD" 4.5-inch LCD display, PureView imaging, 2,000mAh battery with wireless charging and a next-gen Redmond-baked OS, this handset's a big-break proposition for the flailing Finnish company. From the outside, it may appear as though not much has changed in this generational hardware leap, but rest assured that what Espoo's packed inside should take the mobile outfit to the next level. On the downside, what once was matte and grippy is now a polished, glossy affair. Bummer.

Thanks to the bustling event space, we weren't able to put the dumbed-down 8-megapixel PureView module to the test. What should be apparent from that spec alone, is that this Lumia won't deliver the same awe-inspiring optic performance of the 808. Of course, the 920 is infused with Windows Phone 8, sharing a kernel with its desktop sibling. Fans of WP will feel right at home when they power on the handset. The expanded start screen pops with an array of live tiles and vibrant color, even without the AMOLED tech of the Lumia 800.

NOKIA LUMIA 820

Nokia's Lumia 820 is here, after countless leaks, and the budget-friendly handset is exactly what we expected. We'll admit we're sad to see the rather singular design of its spiritual forebear, the Lumia 800, fall by the wayside, but we can't complain about the build quality here. The volume rocker and lock button on the right side have a pleasant and satisfying click, though we're sad to report that the camera button still leaves us wanting. We were also a bit put off by the shine of the body over the previous matte finish. Now, the coats of paint are a little more likely to throw some glare and attract fingerprints.

The 1.5 GHz dual-core processor with 1GB RAM simply chewed through the light-weight Windows Phone 8 and all of the UI animations were smooth and fluid, and apps launched with nary a hiccup. There's simply no mid-range Android phone or iOS device that's as quick and satisfying to use as the Lumia 820, thanks to the highly optimized Microsoft OS. Our one major gripe about the 820 is its screen. The WVGA resolution puts it a full generation behind its competitors and there's no fancy tech at work here. Then again, maybe you'll be able to pick up this little bugger for free on contract.

PRICING: TBD

AVAILABILITY: Q4 2012

THE BREAKDOWN: WHILE THE 820 HANDLES WINDOWS PHONE 8 SMOOTHLY, THE LACKLUSTER WVGA DISPLAY IS DISAPPOINTING.

PRICING: TBD

AVAILABILITY: LATE 2012

THE BREAKDOWN: WITH SIMILAR STYLING TO THAT OF THE PREVIOUS RAZR, THIS UNIT PACKS A 2,500mAh BATTERY TO KEEP THE LTE ROLLING.

MOTOROLA RAZR HD

The curtains have finally been pulled back on Motorola's Droid RAZR HD, revealing little in the way of surprise. Abysmal attempts at secrecy aside, the Verizon-bound handset pushes the line forward with an incrementally larger 4.7-inch screen, 720p display, dual-core 1.5GHz S4 CPU and, most importantly, a 2,500mAh battery to temper LTE's juice-sapping ways. It's just 8.4mm thick and measures 68mm across and 132mm tall, but packs a 4.7-inch display. That panel is a 720p unit and, based on our quick glimpse, it looks to offer good quality and brightness; however, we hear it's PenTile, which is a bit of a disappointment to say the least.

The styling is overall much the same as we've seen before, with the soft-touch Kevlar backing that we've come to enjoy, and a nicely tapered shape that fits well in your hand — but it's less pronounced than in the previous RAZR. In fact, put this phone back-to-back with the MAXX and it's surprisingly difficult to tell the difference between the two! The overall feel of the phone is like that of a brick — but in the "this is really solid" sense, not "this is massive and heavy and I could build a house out of this."

MOTOROLA RAZR MAXX HD

Every family has a big brother and in Motorola's case, it's the Droid RAZR Maxx HD. Under the hood, the handset sports a dual-core 1.5GHz S4 CPU, 32GB of storage, an 8-megapixel camera on back and, last but not least, the star of this show: a 3,300mAh battery. We weren't fans of the initial Droid RAZR, what with its yellow-green display and odd hump back. But this HD update has us a bit smitten. Admittedly, though, it feels a bit odd in hand.

From a distance, the 4.7-inch is incredibly gorgeous with colors that scream right out of the screen. Up close there are some pixels evident, but on the whole that Super AMOLED HD panel is put to good use here. As for real-world performance, that dual-core S4 setup's done well by the Droid RAZR Maxx HD. Navigation moved along quickly and smoothly, transitioning between panes, apps and the app drawer with ease. What we couldn't get a real sense for was browser performance. When it finally did manage to load a page, we tested the pinch-to-zoom feature which briskly resized the selected image and text.

PRICING: TBD

AVAILABILITY: LATE 2012

THE BREAKDOWN: THANKS TO A MASSIVE BATTERY, THE DROID RAZR MAXX HD COULD BE A HEAVYWEIGHT CONTENDER IN BIG RED'S LTE LINEUP.

MOTOROLA RAZR M

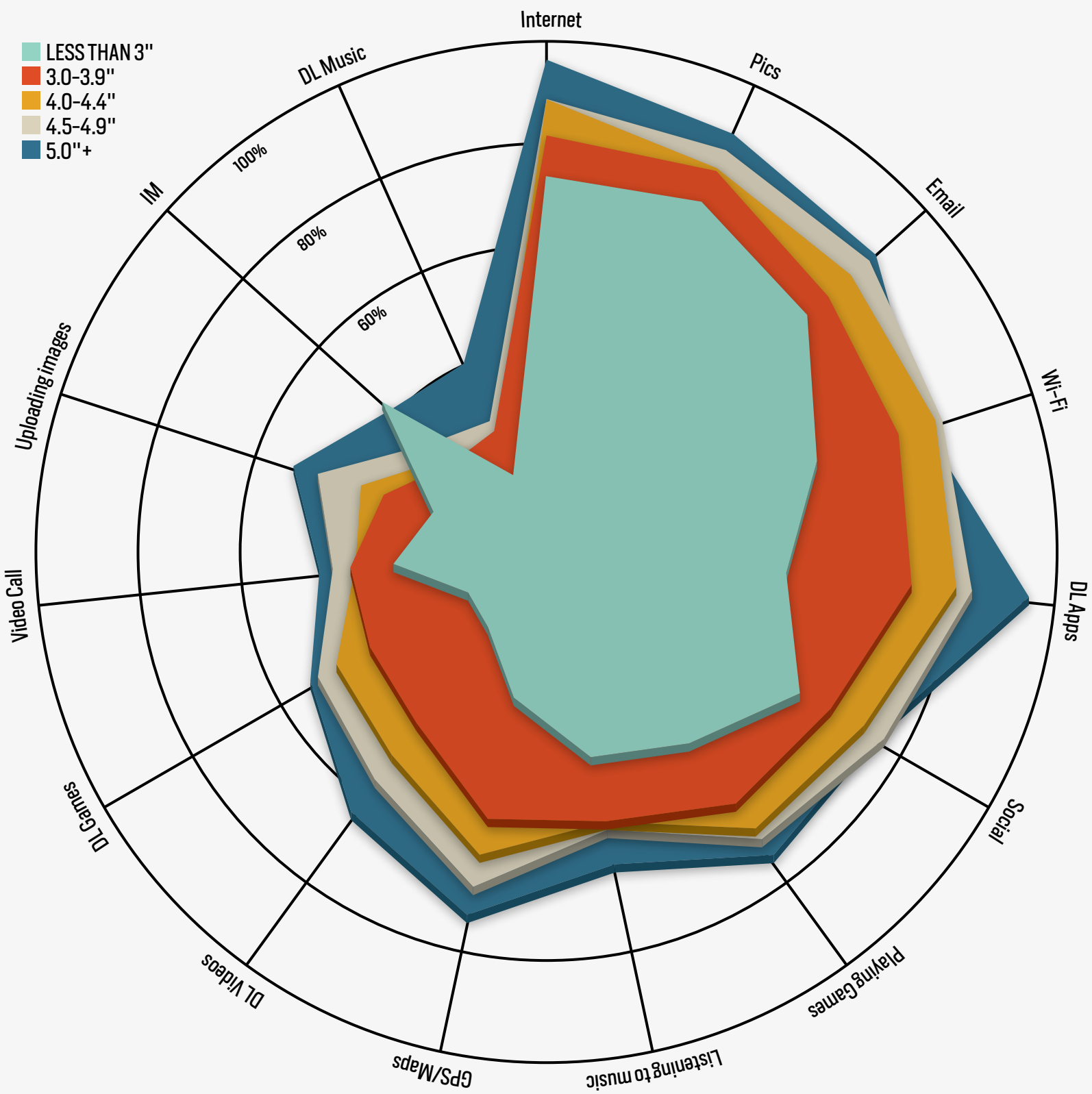
PRICING: $99 (ON-CONTRACT)

AVAILABILITY: MID-SEPTEMBER

THE BREAKDOWN: MOTOROLA CRAMS THE BEST OF THE OG DROID RAZR INTO A SMALLER SHELL WITH A FEW DESIGN TWEAKS.

Motorola just took the wraps off the Droid RAZR M and, we've gotta say, the slender handset is quite the looker. The 8mm-thick body is plastic and Kevlar, just like its titular predecessor, but it adds some nice visual flourishes of its own, including rivets around the rim of the device. The unit sports Android 4.0.4 slathered in Motorola's own skin, though, we'll give credit to the new Google subsidiary for scaling back on the glitz and glam and letting Ice Cream Sandwich shine through a bit. The 1.5GHz dual-core chip under the hood certainly isn't the fastest on the block, but its Snapdragon S4 pedigree means it's more than capable of handling most tasks with aplomb. The 1GB of RAM certainly helps too and it seemed plenty snappy in our brief time with it.

Perhaps the most impressive thing about the RAZR M is the amazing amount of engineering that went into making the Droid RAZR smaller. While the display and all the internals are largely unchanged, the body has simply gotten smaller. And we love the new skin and thinner bezel. It has more of a premium feeling and isn't quite as awkwardly wide as its predecessor. Still, with PenTile on board we've got our concerns. Thankfully, the M isn't a bank buster.



The Big View on Smartphones

There's been a trend towards big smartphones. Sometimes, really big. Even so, concerns have persisted that the cart is driving the horse — that customers are buying big phones because that's what's available. Kantar Worldpanel ComTech might not put that issue to bed, but its latest study suggests there's at least some appeal to all that extra glass. Among Android phones sold in the past three months across eight countries, 29 percent had a screen larger than 4.5 inches. Their owners were more active as well, using the internet and watching videos more often than those whose phones have more modest displays. —*Jon Fingas*

SOURCE: KANTAR WORLDPANEL

RECOMMENDED READING

PHOTOGRAPH COURTESY OF NISSAN

Light Speed

by Preston Lerner
Popular Science

The racecar of the future? Maybe, if the folks from Highcroft Racing have their way. While it's not an all-electric vehicle, or even a hybrid, their appropriately named DeltaWing car is nonetheless an extraordinarily efficient vehicle by any measure, able to top 200MPH with a 300 horsepower engine. It also just so happens to have competed in this year's 24 Hours of Le Mans race (in the one slot allotted for experimental vehicles), and the story of how it got there — and what happened during the race — is about as compelling as the vehicle itself. As told by Preston Lerner of *Popular Science*, that story began a few years ago when Ben Bowlby started work on a new car design for the IndyCar Series. When that submission was shot down, he turned his attention to Le Mans instead, which he and his team ultimately entered with a largely unproven vehicle that had only seen about 12 hours of driving time — and which, unsurprisingly, provided them with their biggest challenge to date.

Click on headlines to read full stories

In Search of the Living, Purring, Singing Heart of the Online Cat-Industrial Complex
By Gideon Lewis-Kraus
Wired
The popularity of cat videos and other associated memes may only amount to a footnote in the history of the internet but, as this exhaustive piece by Gideon Lewis-Kraus for *Wired* makes clear, it's quite a footnote. Despite appearances, though, it's well worth reading whether or not you're a fan of said cats, with Lewis-Kraus taking us to Japan in an attempt to find some meaning behind the meme.

Twitter's Free Speech Defender
by Somini Sengupta
The New York Times
Twitter has been in the news more than usual as of late, recently drawing some criticism over the way it handles third-party apps, and garnering some more positive attention for its involvement in a case concerning an Occupy Wall Street protester's tweets. At the center of the latter is Alexander Macgillivray, the company's chief lawyer, who's profiled in this piece by *The New York Times'* Somini Sengupta.

James Bond meets Virtua Cop: The development of Rare's GoldenEye 007
by Richard Mitchell
Joystiq
Mention the name "GoldenEye" to someone and there's a decent chance that they'll think of the Nintendo 64 game before the movie — and with good reason. The videogame was a defining title of its generation, and perhaps the main reason why many folks will still dust off their N64 today. Here, Richard Mitchell from our sister site *Joystiq* recounts the story of the game's often-surprising creation as told by Rare developer Martin Hollis at the recent GDC Europe conference.

I'M GIVING UP ABSOLUTELY NOTHING

DISTRO 09.07.12 | FORUM | THIS IS THE MODEM WORLD

BY JOSHUA FRUHLINGER

SHE LOOKED AT ME, THEN AT MY PHONE and back at me. She was not pleased. Her eyes darted around the restaurant. They surveyed the other husbands, boyfriends and fiancés: Were they too ignoring their dates, checking sports scores, texting their buddies? Is my husband a jerk or is this a social pandemic?

"What would happen if your phone didn't exist and you had to talk to me?"

"But I am talking to you."

"No, you're looking at your phone."

"Right now, I am saying words to you. How is it that I am not talking to you at this very moment?"

I wasn't going to win this with semantics. No, I lost the moment I decided it was an appropriate time to grab my phone. And, to be fair, I was being a jerk. We were at a nice dinner and I should be into her, not my email, sports scores or Reddit.

So I put the phone away. I promised to not take it out for the rest of the night, a promise I kept. And we had a lovely evening.

Did I learn anything? Absolutely not. Will I pull my phone out again at dinner? Most likely. And she'll do the same thing at some point — I've seen her *Tiny Tower* problem and it's ugly.

There are those who make a very public point of letting go of their technology. They want everyone to stop what they are doing and observe as they declare they will not text, email or Facebook for a month, a year or — gasp

— forever. They station themselves atop an organic soap box and let us all know that they are technology martyrs and they are letting us know how great it is on the other side.

The results are always the same. First, some anxiety and dread. This is where we're told that technology is bad for us, that it's an addictive drug complete with withdrawal symptoms. Then the loneliness and depression are described in detail as we're reminded that technology has become a social crutch.

Then the fear: We're all doomed, so dependent on our tech that when the batteries die, so shall civilization.

Then, finally, exhilaration: The grass is indeed greener on the other side. Without the technology, we are pure, free beings. We communicate face to face. We go outside, we are healthy. We breathe.

Oh, *stop*.

The *Cornell Daily Sun* ran a piece on August 30 by a student whose smartphone died right before a holiday weekend. She first found anxiety and fear, and then, finally, freedom. And how did the piece conclude? She said she loved the experiment with freedom, but, really, he needs his phone. It ends with this quip: "Maybe I'll just never get a cellphone again! Yeah, right."

See what she did there? She showed us how funny it is that we're all so dependent on our devices, yet we're not going to give them up.

Are we really still interested in reading what happens to others when they give up technology? Is this still a topic of import? Isn't it too late? Shouldn't we just learn to live with tech and still be socially graceful? Is there any realistic scenario in which we all give up our gadgets?

The point is often missed in these "I'm giving up tech" articles. The conclusions are all too often overly large: that humanity is broken, that our devices are addictive drugs, that real social contact is in jeopardy. Instead, we should just learn to put our phones away when we have dinner with our wives and then return to them later at a more appropriate time. It's really not that big of a deal anymore. Yes, let's move on. The internet, smartphones, email, texting, social networking and even LOLCats are here to stay.

We just need to learn to be more agile when we choose to use our devices. We shouldn't text and drive (we'll kill other people), we shouldn't check baseball scores during dinner (we should respect our wives) and we should step outside and see our friends in person (it's healthy and beer is yummy).

None of this means we need to give up our stuff.

Let's celebrate our technology. Let's use it to be better humans, better drivers and better lovers. Text your friend for a drink. Email your girlfriend, boyfriend, wife or husband and say something sweet. Meet your future significant other online. Get a laugh online. Technology can be a warm, fuzzy place. D

WHY STEALTH GAMES DRIVE YOU CRAZY

joystiq

REACTION TIME

DISTRO 09.07.12

FORUM

BY LUDWIG KIETZMANN

STEALTH GAMES HAVE A CREEPY COUSIN in the survival-horror genre. The relation manifests in an oppressive environment, which isn't clearly designed or signposted to let the player succeed as easily as he would in a spectacle-driven action game. But while horror is really about conserving quantifiable resources within the claustrophobic confines of an inhospitable world, stealth games expect you to wisely expend your movements and other reckless displays of presence. When it comes to guard patrols and impenetrable installations, as you'll see in Xbox Live Arcade's *Mark of the Ninja* this week, your currency is quieter and more abstract.

"In a stealth game you're fundamentally undetected. The world is just kind of running and it's on the player to poke and perturb it after observing it for a bit, and you can just do a lot more interesting things there," says Nels Anderson, Technical Designer at developer Klei Entertainment. To think of the world as an unpredictable beast, one that might bite off your finger if you prod it in the wrong place at the wrong time, might be a good way to under-

stand the polarized, frustrated relationship some players have with the stealth genre. It's squishy and unpredictable.

Having the chance to study the environment and enemies is a huge advantage, but acting on that information can lead to failure, because it's not always clear what will happen. There's an expectation of perfection, yet a severe punishment of practice — and that can lead to a dreaded OCD loop of loading the last save until you get everything just right.

"There's this challenge, this kind of a gap, between what people know they want to do, and reasonably the stuff their character can do, but they actually have to be fluent enough with the controls to be able to do that," Anderson says. "[Players] can be a bit schizophrenic in that power dynamic. So, the game is almost saying, 'You have to be very careful, don't take a lot of risks.' But to become fluent in the game's systems and the controls and all that stuff, you kinda have to be pretty experimental and take a lot of risks." The result is a kind of pervasive tension, Anderson believes, that stealth detractors don't tolerate.

Mark of the Ninja is an explicit game, though not just in the sense of letting you shove a sword through an unsuspecting man's unsuspecting ribcage. Klei is taking the 3D model, exemplified by genre classics like *Splinter Cell*, and flattening it into a 2D game that's easy to decipher and predict. That isn't to say the entire world

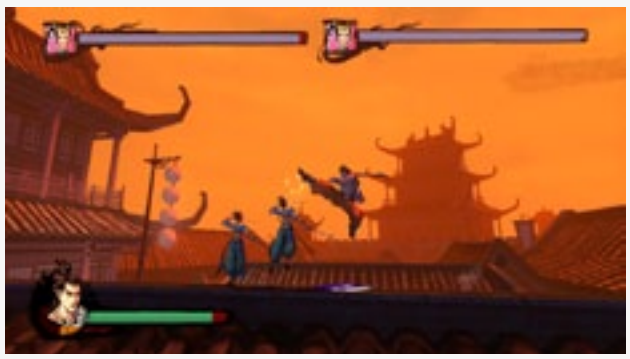
4 NEW GAME RELEASES FOR THE WEEK OF SEPTEMBER 7TH

Click on game to buy

MARK OF THE NINJA
XBLA – $15

CLOSURE
PC – $15

SKYRIM: HEARTHFIRE
Xbox 360 – $5



KUNG FU STRIKE: THE WARRIOR'S RISE
XBLA – $10

To think of the world as an unpredictable beast, one that might bite off your finger if you prod it in the wrong place at the wrong time, might be a good way to understand the polarized, frustrated relationship some players have with the stealth genre. It's squishy and unpredictable.

is laid bare; there's still a cautionary fog obscuring the places you haven't seen, and the rooms you haven't glimpsed through the crack of a door or vent. But there are ways to learn without committing to a dangerous space, and visual cues that reveal the consequences of your actions — before you've even done them.

Your footsteps emit a sonar-like circular pulse, showing you exactly where "earshot" begins and ends. Run faster and your 2D aura of projected audio grows larger, and more likely to absorb attentive enemies. The visualization of your movement is a tool in your arsenal, every bit as useful as your throwing knives or grappling hook. And before you let those weapons fly, you can literally see how loud and noticeable their impact will be.

What the game can do is let you put the whole world on pause and wait for you to line up a string of actions — shatter a lightbulb here and swing to a ledge over there — in a sort of pre-bullet time. Security guards, with their mundane jobs providing convenient video game patterns, still make ideal foils for such a nimble ninja, but even here there's a reduction in mystery. Much like *Metal Gear Solid's* top-down radar, *Mark of the Ninja* turns every enemy's field of vision into an on-screen spotlight. Being caught in that cone doesn't necessarily mark the end so much as a hasty escape or an ill-advised brawl.

I thought the abundance of outlines threatened to make this an easy game, but my early takeaway is that your actions are easier to read, predict and eventually master. Understanding how the game and its systems work shouldn't remove the danger, just the "gotcha" of trial-and-error learning. There's a simpler but more logical basis to the stealth, and it might just underline the problems you knew were there, but couldn't quite see. D

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Canon
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REVIEW

CANON EOS-1D X

Canon's EOS-1D X is the newest heavy hitter in pro photography, but at this hefty sum, are you ready to trade in your current kit?

By Zach Honig

Just before Halloween in 2009, Canon announced its most powerful DSLR to date. The $5,000 pro-grade EOS-1D Mark IV was the company's answer to Nikon's market-leading D3S, which rang in just shy of $5,200. On the basis of price alone, Canon won that round. Then, after two years of silence, the company launched its new flagship, the 1D X. The date was October 18th, 2011 — roughly 10 (or "X") years after the very first model in the series was announced, way back in 2001. A decade ago, Canon priced that introductory 1D at $5,500 — a princely sum considering the 4.15-megapixel CCD on board.

Now, the 1D X, which is arguably the most powerful sub-five-figure camera available, commands 6,799 of your hard-earned dollars, or $800 more than the D4, Nikon's $6,000 equivalent. All this talk of price may seem to skirt the camera's long list of lust-worthy features, but when the cost of any piece of hardware approaches a year's tuition at a public university, a purchase decision deserves thorough consideration.

A camera in this league is absolutely to be used as a professional tool. And while deep-pocketed amateurs may pick one up — in the way folks with cash to burn may build a collection of overpowered two-seaters — the vast majority will live in $30,000-plus kits, where they'll reach six-figure shutter counts, and will likely change hands several times before their eventual retirement. Right now, you're probably researching the 1D X as exhaustively as you would a new car — in fact, you may have even lined up a test drive, through the company's Canon Professional Services group. Many months after it was first announced, we've had an opportunity to take the new eXtreme model for a spin ourselves, and it's every bit as impressive as its price tag suggests. Canon's top model isn't any smaller or lighter than its predecessors, the 1D Mark IV or 1Ds Mark III — but is all that bulk justified, despite strong contenders like the workhorse 5D? Buckle up and join us to find out.

DESIGN

Canon doesn't need to budget any precious advertising funds to spread word about the 1D. The company's flagship model is one of the most photographed DSLRs on the planet, though like the shooters that stand behind it, this camera spends much of its time in the background. Perhaps you caught some of the World Series, or the Super Bowl, or maybe the Olympics — behind each of those enormous white "paparazzi" lenses, there

The 1D X has the familiar 1D body, with subtle layout changes.

was likely a Canon 1D. The camera's design has become iconic, symbolizing professionalism, quality and power.

To the untrained eye and with a bit of gaffer tape atop the prominent silver X, this 1D would look like any other — superficially, the design hasn't evolved all that much in a decade, though button placement has shifted as controls have been added. Like other full-size DSLRs, this model is designed to provide a natural feel in portrait mode (positioned vertically), should you find yourself in a studio setting or alongside a red carpet. Key controls like the AF-ON button, exposure lock and focus position all enable easy toggling regardless of your orientation, while secondary shutter release and exposure dials provide direct access in both positions as well.

Dual CF card slots tucked behind a textured plastic door let you duplicate your captures (with identical cards) or boost capacity, while the large secondary control wheel to the left of the storage compartment hasn't changed a bit over the years. Also identical is the battery design, which provides for easy access while also enabling a secure fit, letting you swap 2,450mAh LP-E4N packs. Up top, you won't find a flash or even a focus-assist lamp, but instead you'll see Canon's signature raised pentaprism, with a hot shoe atop, which you can use to accommodate a Speedlite flash, or perhaps even one of those nifty floral silver covers.

INTERFACE AND SHOOTING MODES

One of the X's most notable strengths is its ability to be customized to your liking. Obviously you can't reconfigure the physical button placement, but you can adjust the settings that they control, re-assigning access so that it's consistent with your previous 1D bodies. Photographers are likely to miss their shot if even a

The 1D X sports a 3.2-inch LCD with improved resolution.

split second is spent looking away from the viewfinder to dig through menus, so a familiar layout is key. If you've used other 1D cameras, you should be able to blindly find your way, just as typing on a QWERTY keyboard becomes second nature over time.

The menu system and organization should be familiar as well, with a total of 24 different configuration screens — options range from color space to in-camera RAW image processing. Custom settings let you adjust exposure level or ISO speed increments, limit the continuous shooting speed (the camera tops out at a very impressive 12 fps) or adjust dial directions — among many, many other options. The menu structure itself is nearly identical to that in the 5D Mark III, letting you use that body as a backup or second shooter while maintaining the same configuration on both cameras.

The 1D X offers your typical array of shooting modes, including full manual, aperture- and shutter-priority, program and a custom program mode. There are also sev-

Dual CF slots allow you to duplicate or expand your storage.

eral drive options, such as single shot, low-speed continuous at three frames per second, high-speed continuous at a whopping 12 frames per second, two time-delay options and a "silent" mode, which is by far the quietest option (compared to the rapid-fire machine gun-like spattering you'll get with 12 fps). If you're going for discretion, however, you'll want to use the 5D instead. As for that 12 frames-per-second mode, we were able to capture 70 consecutive frames with a SanDisk Extreme Pro CF card before noticing any slowdown — assuming you're able to focus, there's really no excuse for missing the shot.

FOCUSING

Captures looked fantastic, as we'll discuss, but you can't snap sharp images in low light if you're not able to focus. A bit surprisingly, we had tremendous difficulty with autofocus in dim settings when paired with a 50mm f/1.2 L lens — environments where we couldn't see very well ourselves, but the 1D X still managed to capture clear, bright images, once it did locate a focal point. Selecting a brighter object at a similar distance allowed us to pre-focus then adjust framing, but if you're shooting in dim light you're probably going to want to add a Speedlite, many of which offer that annoying flash of red light that's admittedly critical in these situations. Unfortunately, there's no focus-assist light built in.

In every other lighting scenario (generally situations where we were able to make out details clearly with the naked eye), the camera's focusing system performed flawlessly, adjusting accurately and with little effort. The 12 frames-per-second shooting mode is certainly useful, but only if you have a focusing system that can keep up. Unfortunately we didn't have an opportunity to test the 1D X at any sporting events, which would have provided the necessary venue to really push the DSLR to its limits, but we were quite pleased during a day-long shoot on the streets of New York City.

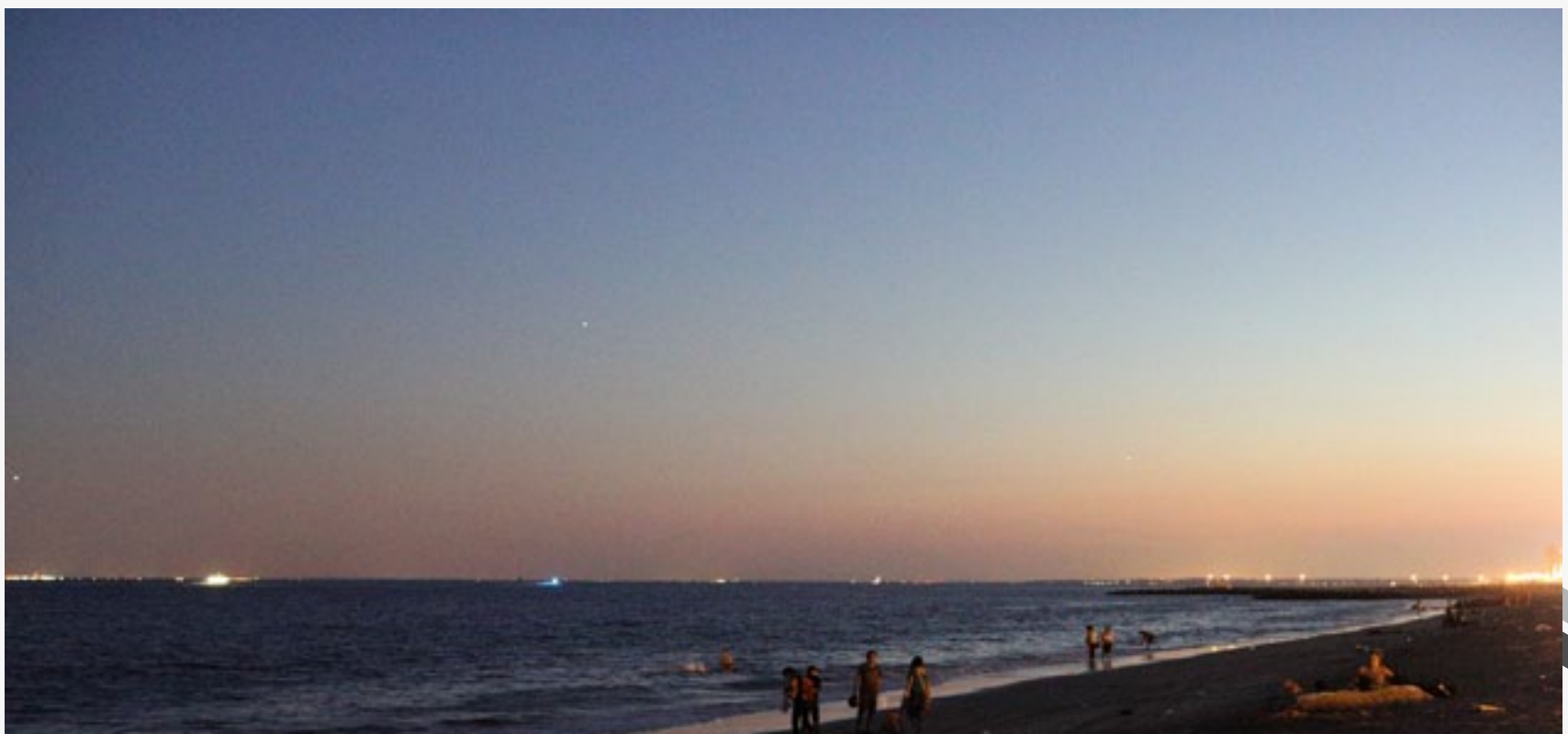
BATTERY LIFE

Whether you're embedded with the military in an active war zone or on the sidelines during a championship game, the last thing you want to worry about while on assignment is swapping batteries, and you should be in very good shape here. We didn't continue shooting until the battery was depleted during our week-long trial, if only because it seemed an impossible task. After more than 2,000 images and several hours of digging through menus and reviewing photos on the built-in LCD, we still had 41 percent remaining according to the system menu. Performance will of course vary depending on external conditions (such as weather) and how much time you spend "chimping" (the practice of reviewing images on the LCD after each capture), but you'll likely be quite pleased.

IMAGE QUALITY

You'd expect Canon to be at the top of its game when it comes to image quality with the 1D X, so we weren't surprised to see that performance was spot on. The images we've included here are JPEGs captured at the highest possible quality setting (10/10) with high-ISO noise reduction turned off. Let's take a look.

Shoot from a moving cab in the middle of the night? You bet. This 50mm shot was captured at f/2.2 and 1/125 second at ISO 51,200 as we sped through an intersection. The camera focused and captured details, including the text on an easel, without issue.



Let's head to the beach. Now don't be fooled by the sky — this f/2.8, 1/16 second frame was shot well after sunset (notice the bright lights of nearby Coney Island in the far right). Still, you can make out plenty of detail with barely visible noise when viewing the full frame at 600 pixels wide.

And what about the view from the boardwalk? Crystal clear, and colorful, even — the typically harsh streetlamps mixed nicely with the night sky to yield this scene. We opened the aperture all the way up to f/1.2 in order to stop motion with a 1/64 second shutter speed, without venturing beyond a 12,800 ISO.

Let's jump back a few hours and catch some of that evening light. Shooting at ISO 3,200 (our typical default, given the 1D X's capabilities), noise was invisible until you jumped all the way up to a 100 percent view. We froze the action in this busy scene at f/11 with a 1/2000 second exposure.

We hopped a ferry to Governors Island to catch some of the best views of Lower Manhattan, including the new World Trade Center site. Bright daylight enabled a 1/4000 second exposure at f/14 with an ISO of 3,200, yielding sharp details in the foreground, and of buildings many blocks away.

You surely don't need to shoot at ISO 320, ever, though that's exactly what we did here. There's no noise as a result, and any softness you may notice was likely caused by the distance between the car and the buildings reflected in the windshield. We captured this last image at f/13 with a 1/50 second shutter speed.

WRAP-UP

If you're a 1D Mark IV owner in the market for a new professional DSLR, you probably already know you're buying the X. 1Ds Mark III shooters who spend most of their time in a studio may have less motivation to jump, however, considering the current street value of that camera and the benefits of the X when shooting in controlled lighting environments. If you don't own either camera now, but instead have a thick wad of cash burning a hole in your wallet, we can't imagine you'll be unhappy with the X — just keep in mind its massive size, and figure how that may fit into your lifestyle. Canon's 5D Mark III is also a fantastic full-frame camera, and may ultimately be the better pick, unless you plan to snap away from your court seats at the Lakers game. If pure power is what you're after, and you need to have the absolute best, you'll want to get behind Canon's latest beast — it doesn't get much more eXtreme than this. D

Zach is a Senior Associate Editor and heads up Engadget's features content. He's also a lifetime lover of everything aviation and photography.

The 1D X was designed for speedy access to its settings.

BOTTOMLINE

CANON EOS-1D X

$6,799

PROS

- Fantastic battery life
- Excellent image quality
- Highly customizable interface
- Sensitivity through ISO 204,800
- 12 frames-per-second continuous mode

CONS

- Larger and heavier than previous 1D bodies

BOTTOMLINE

Without question, Canon's X model is a worthy successor to the famed 1D full-frame DSLR line.

REVIEW

SONY READER PRS-T2

The new Sony Reader has received a facelift and a few minor upgrades, but will this vault it ahead of its main competitors?

By Brian Heater

Here in the states, at least, the e-reader market is ruled by two bookstore giants: Amazon and Barnes & Noble. And while it's not likely to come barreling into the top two any time soon, Sony has made a fairly strong case for number three, particularly with last year's Reader WiFi. That model defied Sony's reputation for over-priced gear, while offering various features unavailable in the Nooks and Kindles of the market (think: pinch-to-zoom and handwriting capabilities). The new Reader PRS-T2 maintains many of the features that made the Reader WiFi a solid

choice, though it adds Evernote integration, smoother page turns and a generally more streamlined design. So is the refreshed Reader worth recommending over competitors like the Nook Simple Touch with GlowLight and Amazon Kindle Touch?

HARDWARE

The PRS-T2 looks a lot like its predecessor — and most e-readers these days — with the majority of its face taken up by that industry-standard 6-inch Pearl E Ink display. At 6.9 x 4.4 x 0.4 inches, the Reader has roughly the same dimensions as Amazon's Kindle Touch (6.8 x 4.7 x 0.4), though it's a fair bit lighter, at 5.9 ounces (versus 7.5 for the Kindle Touch). Sony's stuck with some sharp corners with this reader, which can get a little uncomfortable if you have a tendency to cradle the device in your palm. In particular, after spending so much time with the new glowing Nook, it's a bit hard to go back to this slightly awkward shape. There's no concave backing and the device generally doesn't do a great job conforming to the hand. Oh, and if you're a fan of physical page-turn buttons, you'll likely discover there's really no comfortable way to read it one-handed without a good deal of jostling — sorry, public transit readers.

Sony's joined Barnes & Noble and Kobo on Team Matte Finish for the PRS-T2, a small tweak that actually makes a world of aesthetic difference. The updated Reader really does look a heck of a lot nicer without the shiny piano finish used on its predecessor. There's no physical keyboard, of course (what is this, 2010?), which saves some real estate on the front of the device. There are, however, still several physical buttons on the device's face — the company did a good deal of back-patting about the hardware keys when it gave us a sneak preview of the Reader ahead of the public launch. The buttons are located below the screen

The sharp corners on the PRS-T2 aren't hand-friendly.

as before, and the layout is the same, too: Left, Right, Home, Back and Menu. This time, though, the buttons are much more to look at than those little rectangular dealies that graced the Reader WiFi.

The big silver icons serve as the buttons themselves. They're nice and responsive, but the company seemingly overlooked one important thing when creating them: they actually kind of hurt to touch, with lots of thin lines and sharp corners that dig into your thumbs a bit as you press. For the most part, that shouldn't be a huge problem — you're not likely to get a repetitive stress indentation from Home, after all — but those who prefer turning their pages the old-fashioned way may walk away with a bad case of reader's thumb after working their way through "The Power Broker." And while we're definitely in favor of offering up physical button alternatives to finicky E Ink touchscreens, we wish the company had taken a hint from the Nook's soft-touch keys, which also happen to be more intuitively located, off to the sides of the display.

The last — and possibly most important — physical button is located on a small lip on the bottom of the device.

Along with power and a micro-USB you get a microSD slot.

That would be the power button, and all told, the PRS-T2 takes about 20 seconds to fire up from a cold boot. The button is also used to toggle in and out of sleep, which brings up a screen saver featuring the cover of the book you're currently reading — to be honest, we still prefer Barnes & Noble author sketches, but that's just us. To shut the device down, hold down power while the device is awake. To the left of the power button are a micro-USB slot for syncing / charging and a reset button that should come in handy when your screen freezes — an inevitability with this technology.

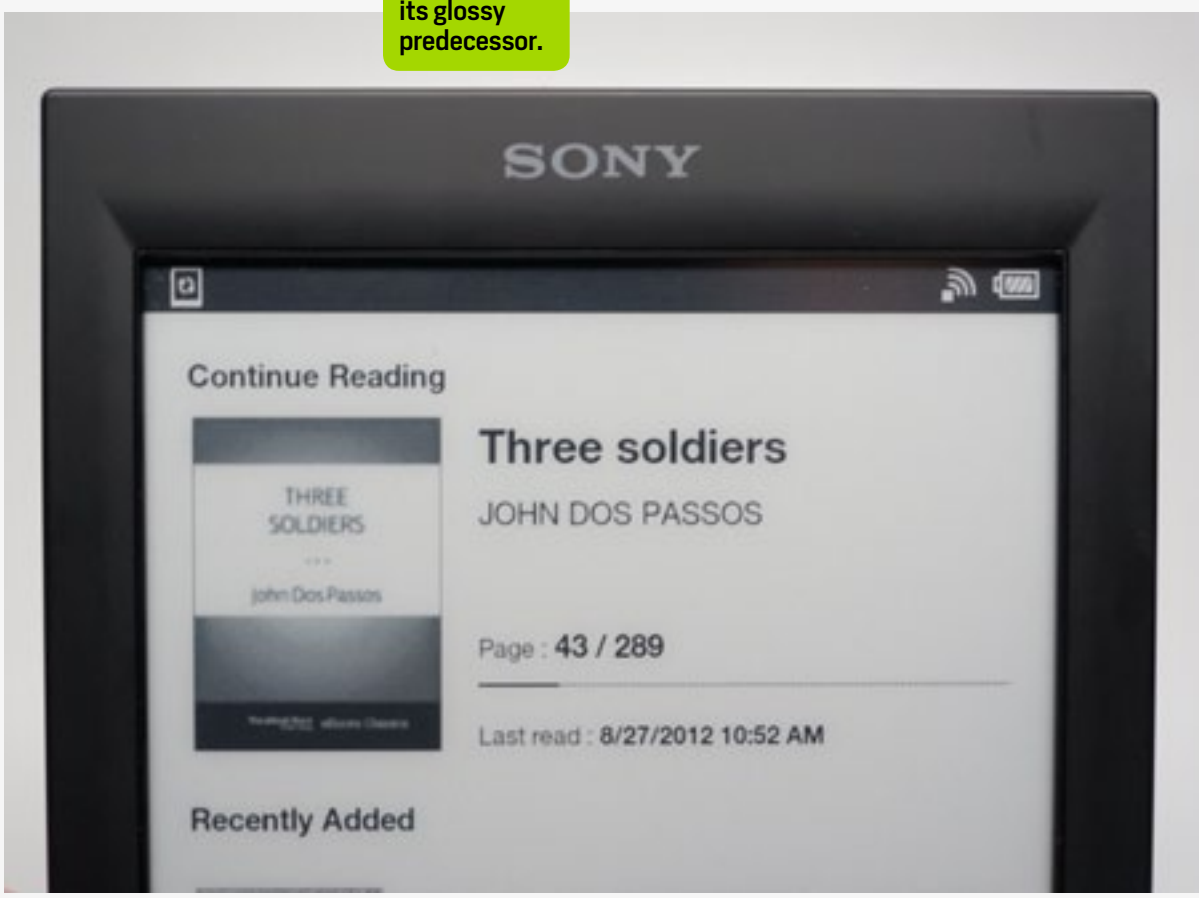
The rear of the device doesn't offer much of interest — there's a Reader logo on the top in gray text and all of the requisite fine print (FCC, Made in China, blah, blah, blah) on the bottom. On the right side, you've got a covered microSD slot, which will help you complement the Reader's built-in 2GB of storage by as much as 32GB. The battery, meanwhile, should give you a fairly standard estimated two months of reading time, provided WiFi is turned off.

READING

Page turning is extremely zippy on the PRS-T2 (Sony wouldn't say what processor is inside). We're also impressed at how the company has worked to decrease full-page refreshes — those black flickers only interrupted us once every 15 pages or so on the John Dos Passos book we downloaded. That rate isn't entirely consistent, however: with another title, we found ourselves getting back-to-back flicker several times. Flipping through pages backward, on the other hand, tends to significantly increase the flicker rate.

As you'd expect, you can turn the page with your finger by swiping across the page — interestingly, while the device defaults to the standard right-to-left to page ahead in the book, that setting can be inverted in the applications menu. You can also turn the pages forward and back by swiping down or up, respectively. Tapping to change pages, however, isn't an option. If you need to jump to a given page, click Menu, which brings up a

The matte finish is quite a step above its glossy predecessor.



scroll bar, access to the table of contents and a field for entering the page number manually.

The text itself isn't particularly crisp (though it's still not quite as dull as on the Nook Simple Touch with GlowLight). And while it's possible to darken things in settings, doing so will actually cause the whole page to become dimmer. We also noticed a fair amount of text ghosting, both when flipping pages and, in particular, when flipping away a page containing images. Thanks to the dual-touch display introduced on the last-gen Reader, you can make the text larger by pinching to zoom with two fingers. Snapping the page into place is a bit clumsy here, but that's to be expected, given the limitations of the E Ink display.

Menu also offers up access to the notes you've taken and a number of settings. From here you can crop pages and adjust brightness and saturation. You can also choose from eight font sizes and seven styles (Verdana, anyone?). Clicking through to More brings up options for searching, syncing your last page, posting a page to Facebook and still more options. Using the search function brings you to the first instance in the book that features the word you're looking for (which is highlighted in black on the page). You can click forward and back to find it elsewhere in the book.

SOFTWARE

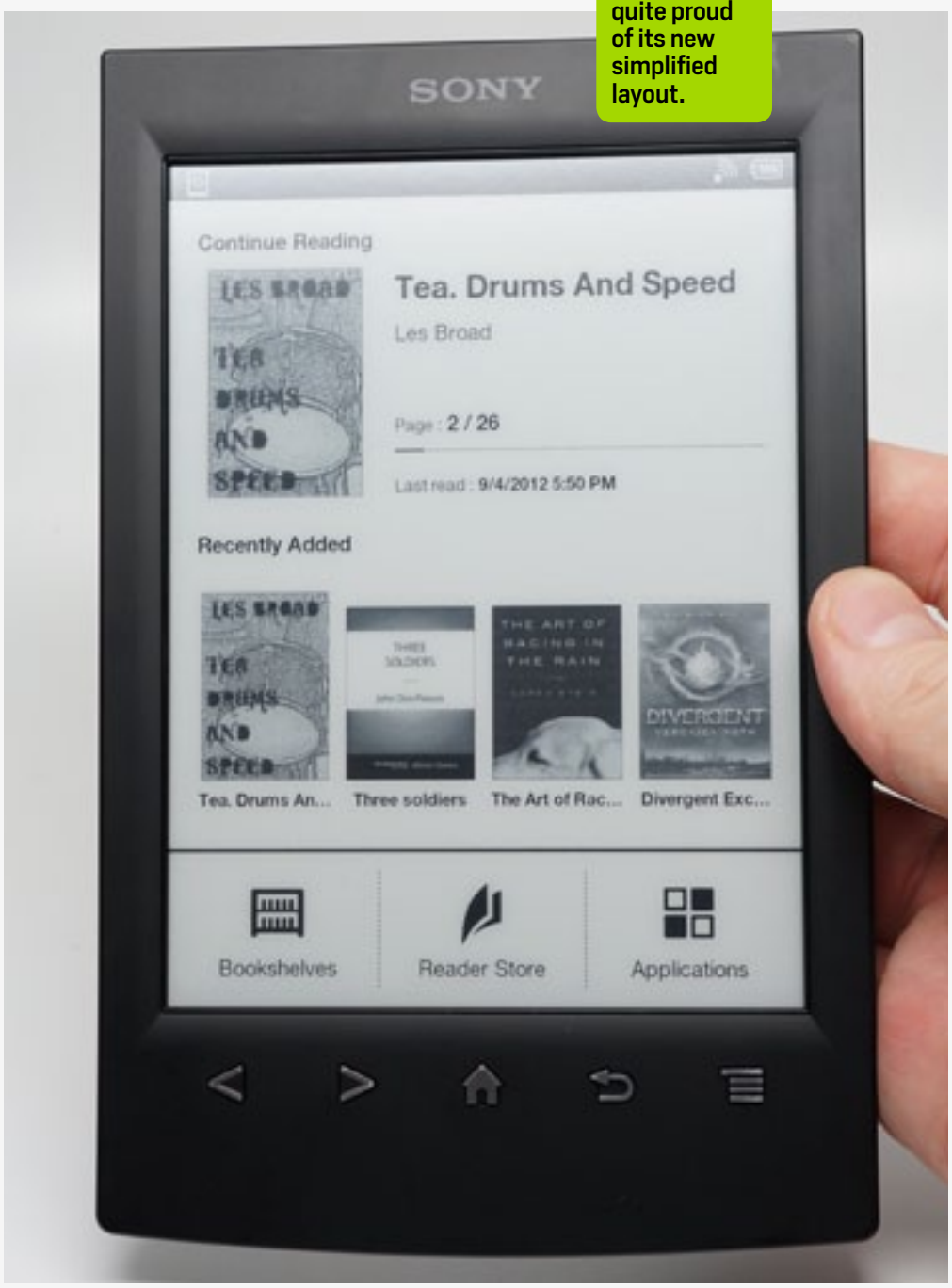
You're looking at a pretty straightforward homepage here (in fact, Sony is touting its new, simplified layout), with a black tool bar offering up your WiFi status and battery level. Most of the top third of the screen is occupied by the book you're currently reading, including the cover, title and author, plus your reading progress and the precise time you last read it, down to the minute — a boon for obsessive-compulsive readers. Below that are the covers and titles of your four most recently added books (they'll have a "New" in their upper right-hand corner if that's the case). At the bottom of the screen are large touch buttons for your bookshelves, a link to the store and the gateway to the Reader's applications.

Bookshelves offer a quicker way to peruse your collection, with the books organized into rows, offering up to nine per page in cover mode — you can also toggle into text mode to fit even more. A refining button, meanwhile, lets you change the way you sort your books: by the title, author, file name, the date you downloaded it or the last time you read it. There's also a search button in case you're having trouble locating the Dostoyevsky amongst all those volumes of "Twilight." Clicking the Menu button also brings up a handful of options, letting you add books to different customized collections or predetermined bookshelves (including Books, Collections, Purchased Content and Evernote), delete titles, protect titles (from accidental deletion) and return books checked out from the library.

READER STORE

The biggest update on the Reader Store front actually has little to do with the device itself. The shop now has a browser-based interface, so you can buy e-books from the comfort of your desktop, saving you from having to rely solely on your Reader's keyboard to purchase books. As you can imagine, this is a really convenient touch. If you purchase content this way you can also read it on your computer or Android device using Sony's Reader app. The PRS-T2's built-in store is easy to use as well — the navigation and layout are all pretty basic, which is precisely what you need on a device like this. For the uninitiated, it has a search field up top, a carousel of featured titles and some quick selections including Browse, New Arrivals, Authors, Bestsellers, Newsstand and Bundles. As for selection, Sony's seems pretty thorough — yes, it had the new Yo La Tengo book we were looking for.

And when it comes to supporting local libraries (not to mention, saving some cash on book downloads), Sony's once again offering quick access to OverDrive-powered library browsing. Click on the app and it'll prompt you to locate your local branch via a search field. Once on their page, you can enter your relevant card info to start the borrowing. Interestingly, Sony has pushed this option into the background a bit, as well as removing easy access to Google Books (though as a spokesperson points out, "there are still thousands of free classic e-books available from Reader Store"). It seems as though the company might be looking to make up a bit more cash on content, considering the steadily dropping sale price of its Reader hardware.



Sony's quite proud of its new simplified layout.

APPLICATIONS

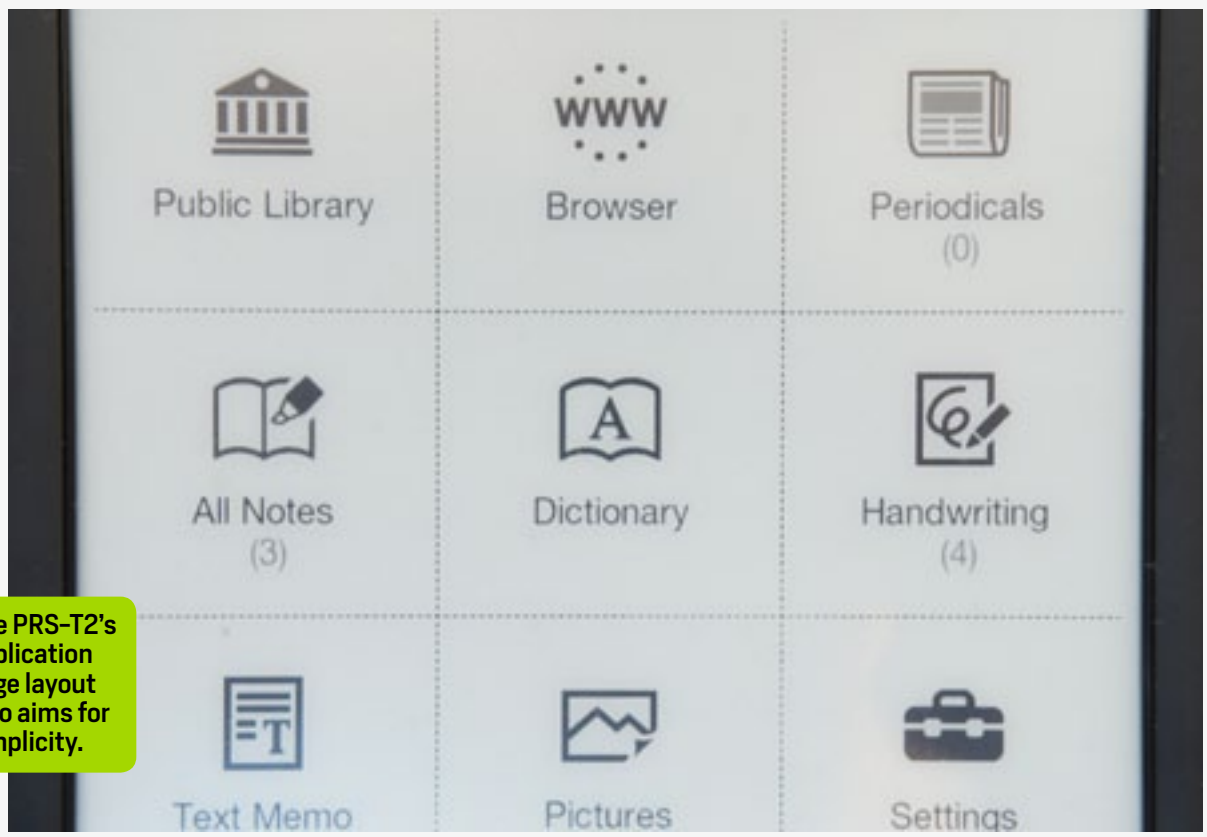
As before, bells and whistles are where Sony sets itself apart, and on the PRS-T2, the Applications page is where

most of that magic happens. As with the homepage, the layout isn't much to look at — it's laid out in a basic 3-by-4 grid. Default applications include Public Library, Browser, Periodicals (which we sort of wish was grouped in with the books), Notes, Dictionary, Handwriting, Text Memo, Pictures, Settings, Evernote Setup and Facebook Setup. Audio playback has, meanwhile, been unceremoniously dropped from the Reader.

There are few things in this world quite as frustrating as a web browser on an E Ink device, and the PRS-T2 does little to change that. Everything's small and in low-res grayscale, and scrolling is a mess of stuttering, flickering and image ghosting. It's hardly an ideal experience, and we recommend you drag and drop needed content from your PC whenever possible. Still, it's there when you need it.

Good news for fans of the New Oxford American: that's precisely the dictionary you get if you join Team Sony (though you can also go in for the good, old Oxford English Dictionary, or four other foreign language options, even). You can find it amongst the applications, and it instantly starts showing relevant entries as soon as you start typing your word into the search field. As fun as that option is, we suspect that the New Oxy will be getting a lot more play within the texts themselves, a feature accessible by holding down on a word. Do that and the definition pops up at the bottom of the page.

We were admittedly impressed by the inclusion of handwriting on the Reader WiFi, so we're not too surprised that Sony brought this popular feature back for the sequel. It's a bit difficult to master, but we find it's more efficient if you put a little bit of your fingernail into it — not too much, of course, you don't want to scratch your precious reader. The question, then, is what precisely you'd need such a feature for. Sony offers up a couple of possible examples, including a crudely scribbled map, a basic math equation and a drawing of a cup of coffee, all of which ship with the device like those pictures of happy families that come with department store pic-



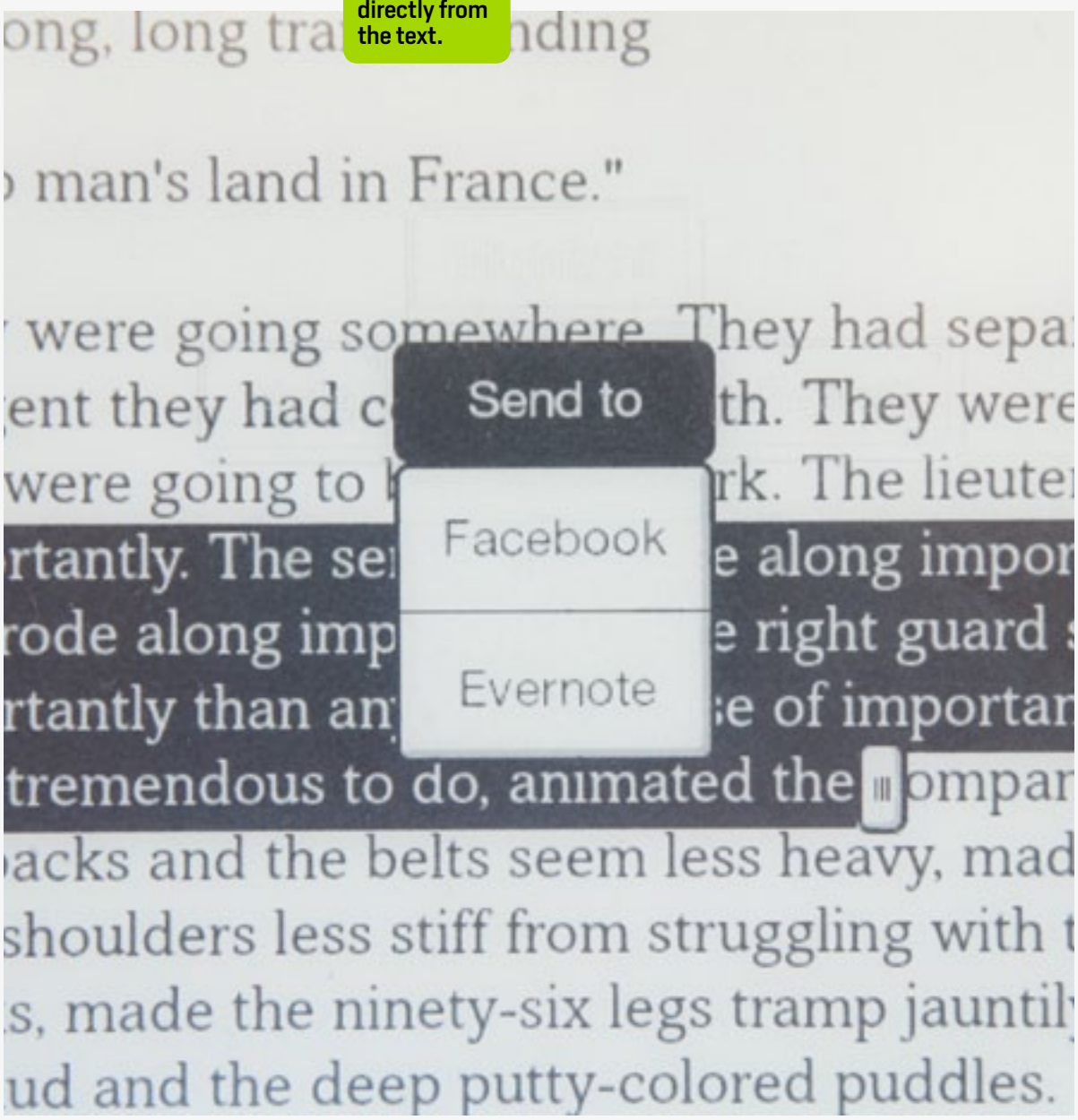
The PRS-T2's application page layout also aims for simplicity.

ture frames. They also go a ways toward proving what we've long suspected: that handwriting is a neat, but often unnecessary, feature for most users. Certainly, it's nowhere near efficient enough to take detailed notes.

Handwriting does, however, come in a bit handier when you're actually reading. You can access that option by clicking the Menu button while reading, which makes it possible to take notes (albeit, sloppily written ones) directly on the text. An eraser icon pops as well, letting you wipe away any mistakes. Again, the feature doesn't have much going for it in the proficiency department, but we can see it being useful when you've absolutely got to jot down a note — or, you know, draw a coffee cup — and breaking out the smartphone just won't do.

Notes written on books will also show up in the All Notes app, along with bookmarks and highlights. Book notes are identified by the text at the top of the page you've scrawled on. Clicking that entry will bring you directly to that page. And when handwriting just won't do, there's the Text Notes option, which lets you type your thoughts on the virtual keyboard — which suffers all the sorts of stuttering lags we've come to expect from touchscreen E Ink keyboards. It does, however, offer up smartphone-style predictive text at the bottom of the screen, which may help address some of the headache of this physical keyboard-free world we're all living in.

The images option, meanwhile, is a great way to view some of your favorite pictures in 16 glorious levels of grayscale. Fittingly, the Reader ships with images of books and a library (remember those?). You can also add your own by dragging



and dropping them through a maze of folders when the e-reader is hooked up to your PC. So, what can you do with the images? Not a heck of a lot, honestly — you can set them as a slideshow, adjust their orientation or upload them to Evernote.

On the social side, the big news here is the addition of yet another platform for syncing your Evernote clips. You can download notes from your account and when you find a passage in a book that you like, highlight it, click "Send to" and you'll be able to send it to Evernote or Facebook, with that passage remaining highlighted in the text and accessible through the All Notes module.

WRAP-UP

Similar to its predecessor, the PRS-T2 offers plenty to like, from dual-touch pinch-to-zoom to note-taking capabilities to easy public library access. There's nothing here that really blows us away, however, leaving the Reader feeling like little more than a gently tweaked version of the (admittedly good) last-gen model. It's certainly a better-looking device, though the new, sharp-edged metal buttons feel like a misfire. And while we definitely appreciate the speed here, the text ghosting can be a bit distracting. Sony's also seen fit to drop the price to a competitive $129 (that's $10 cheaper than the glowing Nook). Oh, and the company's throwing in a copy of "Harry Potter and the Sorcerer's Stone" to help sweeten the pot. In all, the new Reader should maintain Sony's current position in the market: a solid — but imperfect — alternative to the big two. D

Brian's work has appeared in Spin, The Onion, Entertainment Weekly, The New York Press, PCMag, Laptop, and various other publications.

BOTTOMLINE

SONY READER PRS-T2

$129

PROS

- Note-taking capabilities
- Dual-touch zooming
- Expandable memory

CONS

- Some awkward design elements
- Image ghosting
- No more audio playback, Google Book access

BOTTOMLINE

The PRS-T2 is a slightly refined version of last year's Reader. There aren't many changes to report, but the new Reader remains a solid choice nonetheless.

THE BEST (And The Rest) OF IFA 2012

The Big Trends and Top Devices from Europe's Premiere Consumer Electronics Show

From 84-inch 4K TVs to cameras running Google's OS, last week's installment of IFA brought with it a slew of new trends and standout gadgets. With names like Samsung, Sony, Acer and Lenovo filling the streams of gadget blogs and occupying newspaper columns, just following all the news was a feat in itself. In an attempt to leave no touchscreen Ultrabook unturned, we bring you the best (and the rest) from the German show floor.

SMARTPHONES

MORE TO TOUCH

84-INCH 4K TVS

WINDOWS 8 HYBRIDS

SINGULAR STANDOUTS

Smartphones

While IFA may not be focused on mobile, the show floor certainly saw its fair share of smartphones this year. Both Samsung and Sony used their keynotes to out their next big handsets, while brands like HTC and Huawei had their own mobile news to announce.

SAMSUNG GALAXY NOTE II

PRICE: TBD
AVAILABILITY: October 2012 (Select Markets)

Click on product names to read full stories

The latest iteration of Samsung's flagship "phablet" packs a larger 5.5-inch, 1,280 x 720 16:9 screen, but falls roughly within the same footprint as its predecessor. It now has a more powerful SoC, up from a dual-core 1.4GHz processor to a new quad-core 1.6GHz Exynos chipset, as well as Android Jelly Bean right out of the box. But the real improvements come with the S Pen, which has been increased in size for ease of use. It also features a rubberized tip to give it more pen-like friction on the glass screen. Pressure sensitivity is the same as on the new Galaxy Note 10.1, which means you get a full 1,024 levels of sensitivity instead of the old Note's 256. Samsung's included the capability to recognize when the S Pen is removed from the device, which can trigger the app of your preference or the default note creation screen. It will also alert you when you leave the S Pen too far behind. Other notable additions include AirView, which detects the hover position of the S Pen, and Pop-up Note, which allows you to run S Note on top of other apps.

— Mat Smith, Zach Honig and Sharif Sakr

SONY XPERIA TX

Click on product names to read full stories

PRICE: TBD

AVAILABILITY: TBD

Sony introduced three new members to its Xperia line at its IFA press conference. The breadwinner of the pack, the Xperia TX, comes outfitted with a 4.6-inch, 720p HD display powered by the Mobile Bravia Engine, a 13-megapixel rear camera capable of sleep-to-snap fast capture and NFC functionality. When you pick up this Android 4.0 ICS handset you notice its extreme lightness, because the TX weighs in at just 127 grams (about 0.28 pounds). Though it's being marketed as a premium device, it has neither that appearance nor in-hand feel. That could be due to its slim profile, but there's also a disconnect between its high-end specs and actual performance. In our brief time with it, we noticed an extremely visible lag when attempting to rotate the home screen from portrait to landscape and that same sluggishness was evident when we attempted to access the app drawer. Lest you think this is a quad-core affair, in keeping with its high-profile debut, it's not — there's a dual-core setup under that shiny shell clocked at 1.5GHz. And, as we said before, it could do with some heavy optimization. — *Joseph Volpe and Mat Smith*

More Smartphones

Click on product names to read full stories

SONY XPERIA V

HUAWEI ASCEND G600

ACER LIQUID GALLANT

More to Touch

They work on smartphones, tablets and even ATM machines, so why not slap a touchscreen on everything? This question seemed to be at the heart of one of the more confounding trends this year: the touchscreen PC. Whether you view the move with a healthy dose of skepticism or not, manufacturers seemed determined to capitalize on your love of touch.

HP SPECTRE XT TOUCHSMART

PRICE: $1,400
AVAILABILITY: December 2012

Click on product names to read full stories

In addition to all those funky-looking hybrids, you're going to see lots of familiar-looking laptops get upgraded with touch in time for Windows 8. Exhibits A and B: a finger-friendly version of the 14-inch Envy 4 Ultrabook and the 15-inch Spectre XT TouchSmart Ultrabook. The Spectre XT features the same aluminum-and-magnesium design introduced on the 13-inch XT. Aside from being bigger, though, it also steps up to a 1080p IPS touchscreen, making this the first time HP's used a 1,920 x 1,080 display on one of its Ultrabooks. It's also relatively thin, at 17.9mm and 4.77 pounds. On the inside, it runs Ivy Bridge processors and can be configured with either solid-state storage or a hybrid hard drive paired with a 32GB SSD. The Spectre XT has room for more ports than its little brother, with an Ethernet jack, two USB 3.0 ports, one USB 2.0 socket, a memory card reader, a 3.5mm headphone port, a Kensington lock slot and HP's first Thunderbolt port. — *Dana Wollman, Edgar Alvarez, Mat Smith and Joseph Volpe*

ACER ASPIRE M3 TOUCH AND ASPIRE V5 TOUCH

Click on product names to read full stories

PRICE: TBD

AVAILABILITY: TBD

Continuing the touchable trend, the Aspire M3 Touch has a frameless, 15.6-inch screen and the same aluminum design as the older M3. Thanks to that touchscreen, though, its chassis has widened to 22mm thick (the weight is now 2.3kg, or 5.07 pounds). On the inside, however, not much has changed: it will still be offered with Ivy Bridge processors and discrete NVIDIA graphics — in this case, a GeForce GT640M GPU. It's a similar story with the Aspire V5 Touch, which will be sold with 14- and 15-inch screens. Here, too, the design resembles already-available V5 laptops, except these have a little extra heft due to the touchscreen. Also, the touchpads are said to be larger this time around. Now, they measure a little under 23mm thick, and weigh 2.1kg and 2.4kg, respectively. Though the V5 has always been low-end compared to the M3, it offers potentially similar horsepower, with Ivy Bridge CPUs and discrete NVIDIA graphics. — *Dana Wollman, Mat Smith and Joseph Volpe*

Even More to Touch

Click on product names to read full stories

SAMSUNG SERIES 5 ULTRA TOUCH

SONY VAIO TAP 20

84-inch 4K TVs

Perhaps the biggest (if in size alone) trend to come out of this year's IFA was the 84-inch 4K TV. Big screens littered the booths of many a manufacturer, proving that in the case of HD displays, size does matter.

SONY'S BRAVIA KD-84X9005

PRICE: $25,000
AVAILABILITY: November 2012

Click on product names to read full stories

As ever, Sony's IFA press conference was a veritable storm of products, but CEO Kaz Hirai was clearly the most excited about the company's new 84-inch 4K TV, the Bravia KD-84X9005, and after beholding the thing for a bit alongside a scrum of fellow tech journalists in Sony's booth at IFA, it's pretty clear why. The thing is beautiful — and yeah, we can confirm, as Kaz suggested, that you really do want to stick out your hand and touch the picture when you're standing in front of it, particularly, when the video cycles through images of the ocean, with water droplets hitting the screen. At 84 inches, this thing is a beast, with at least a dozen or so folks standing comfortably around it to catch a glimpse of the display.

The Bravia is surprisingly thin for such a beast. There are speaker bars attached to either side of the display, with a control panel along the bottom, and the stand consists of two metal bars holding up what's surely a weighty set. — *Brian Heater and Zach Honig*

TOSHIBA QUAD FULL HD TV

Click on product names to read full stories

PRICE: TBD

AVAILABILITY: Early 2013

It seems "84" was the magic number at IFA this year; 84 inches, that is, when it comes to 4K TVs. This Toshiba set has a slightly sleeker housing, aided by the fact that it doesn't have side-mounted speakers as with Sony's flavor — though, if you're able to afford a (yet-unpriced) TV of this caliber, a premium surround-sound rig better be on the agenda as well. The picture quality, as you might expect, was fantastic. You'll see individual pixels once you're within a few feet of the display, but given its 84-inch footprint, you're going to want to position yourself quite a distance from the panel in order to take it all in. Toshiba had three sets on display, running through loops of game play, cityscapes and some decked-out human models. The ambient setting was favorably configured, and with ideal content, colors were vibrant and the picture was incredibly bright and sharp, even when viewed from a slight angle. There was a hint of reflection, but only when a dark image popped into frame, despite a multitude of visual noise in the area. You'll need to see Toshiba's 84-inch, 3,840 x 2,160-pixel TV in person to get the full effect. — *Zach Honig*

One More 84-inch 4K TV

Click on product names to read full stories

LG'S UD 3D TV

Windows 8 Hybrids

With the release of Microsoft's next big OS overhaul inching ever closer, OEMs are eager to get their Windows 8 devices in front of consumers. Last week saw the introduction of a handful of new Windows tablets, most of which take advantage of the operating system's dual nature. With keyboards being the common thread, it's clear the first wave of Win 8 tablets aim to put productivity at the fore.

HP ENVY X2

PRICE: $1,400
AVAILABILITY: 2012 Holiday Season

Click on product names to read full stories

You didn't think the world's top PC maker was going to sit out the laptop / tablet trend, did you? HP's Envy x2 is an 11-inch tablet that comes with a keyboard dock. And while that form factor may seem tired, HP is dressing it up with some higher-end features, including an aluminum build, NFC, pen support, Beats Audio and a 400-nit, IPS display. (The resolution is 1,366 x 768, as is the case for many of these 11-inch Windows 8 hybrids.) It measures about 8.5mm (0.33 inches) thick and weighs 1.5 pounds, while the dock weighs 1.6 pounds. Unlike competing products, the device combines magnets and a mechanical latch to keep the tablet in place. We were impressed by how light the tablet and dock felt. Under the hood, the x2 runs an Atom-based Clover Trail processor. Though HP isn't talking battery life, every other OEM releasing a Clover Trail device is promising between nine and 10 hours of runtime. What's more, the dock has a built-in battery of its own, so you'll definitely have some reserve power there. The dock houses two USB ports, HDMI output and a full-size SD slot, while the tablet is home to an 8-megapixel rear camera and microSD slot, in case the 64GB of built-in storage isn't capacious enough. — *Dana Wollman and Edgar Alvarez*

SAMSUNG ATIV SMART PC

PRICE: $ 749 (with dock)
AVAILABILITY: October 26th

Click on product names to read full stories

Would a Series 5 Slate be just as sweet under any other name? The ATIV Smart PC (aka the Series 5 Slate) is a lot like the Series 7 (aka ATIV Smart PC Pro), though it is a smidge thinner and lighter, given the fanless design and inclusion of an Atom-based Clover Trail processor. Another difference: that 11.6-inch display. It's still bright, but the resolution is a lower 1,366 x 768, as opposed to the 1080p panel used in the Series 7. That caveat aside, the Series 5 is still pretty sexy, with that vibrant display and brushed metal back — though, that beauty clashes a bit with the relative cheapness of the keyboard dock. Samsung is loading all of its Win 8 systems with its various Media Hubs. You'll also find AllShare, a DLNA media-sharing app; S-Launcher, a widget that replicates the missing Start Menu in Windows 8; and eSettings, a centralized options menu for folks who maybe haven't learned where all the settings are in Win 8. As for those S Pen applications, you've got S Note, among other carry-overs from the Android side. As with the Note 10.1, the pen itself can recognize 1,024 degrees of pressure sensitivity. — *Brian Heater and Dana Wollman*

More Windows 8 Hybrids

Click on product names to read full stories

DELL XPS 10

SONY VAIO DUO 11

SAMSUNG SERIES 7 SLATE

Singular Standouts

While every trade show is marked by overarching themes, some devices inevitably standout from the crowd. From Android cameras to telephone gloves, here are the devices that defied categorization.

SAMSUNG EK-GC100 GALAXY CAMERA

PRICE: TBD

AVAILABILITY: October 2012

Click on product names to read full stories

Nikon beat Samsung out the door with its Android 2.3.3 Coolpix S800c, but this is an entirely different beast. The back of the camera is occupied by an edge-to-edge 4.8-inch, 1,280 x 720-pixel (308 ppi) display. There are still a few hardware buttons on board, including a flash release, a power button, zoom toggle and shutter release, but you'll spend most of your time interacting through touch. Despite its rather large profile, it features a standard 1/2.33-inch BSI CMOS sensor, capable of 16-megapixel snaps. Don't expect top-of-the-line image quality, but the 21x, f/2.8-5.9, 23-480mm lens will get you closer to the action than any smartphone on the market. There's WiFi on board, as well as 3G and 4G connectivity, and a 1,650 mAh battery, which Samsung says provides up to seven hours of battery life while connected. Without standard phone functionality, the Galaxy Camera won't replace your smartphone — not to mention that the rather bulky form-factor would end up being quite a nuisance — but if you don't make calls, this could theoretically be the only device in your (rather spacious) pocket. We can't speak to image quality just yet, as we weren't permitted to transmit samples, but based on the existing SMART line, we'd expect acceptable, though not spectacular stills. — *Zach Honig and Sharif Sakr*

SAMSUNG SERIES 9 CONCEPT

Click on product names to read full stories

PRICE: TBD

AVAILABILITY: TBD

Well, this snuck up on us. Close to the end of the first official open-floor day at IFA, Samsung managed to eke out yet another product we want to get our hands on, soonish. This 13-inch Series 9 WQHD Ultrabook beams Windows 8 on a 2,560 x 1,440 display (oh yes), making a visible leap beyond the existing Series 9 13-incher, which sticks to a more typical 1,600 x 900. Better still, the surface of the screen has a gentle matte finish. The engineering sample arrived in the Samsung spokesperson's hands just seven days before the show. The resolution matches ASUS' high-grade gamer monitor in pixels, if falling ever so slightly short of the Retina Display on Apple's newest MacBook model. There was no news on what the manufacturer will call the new display tech, further specifications, or even whether this was just a proof of concept — the device was chilling in the corner of the electronics giant's innovation gallery. Hopefully, Samsung won't hold out on those details for much longer. — *Mat Smith and Joseph Volpe*

More Singular Standouts

Click on product names to read full stories

HI-FUN BLUETOOTH GLOVES

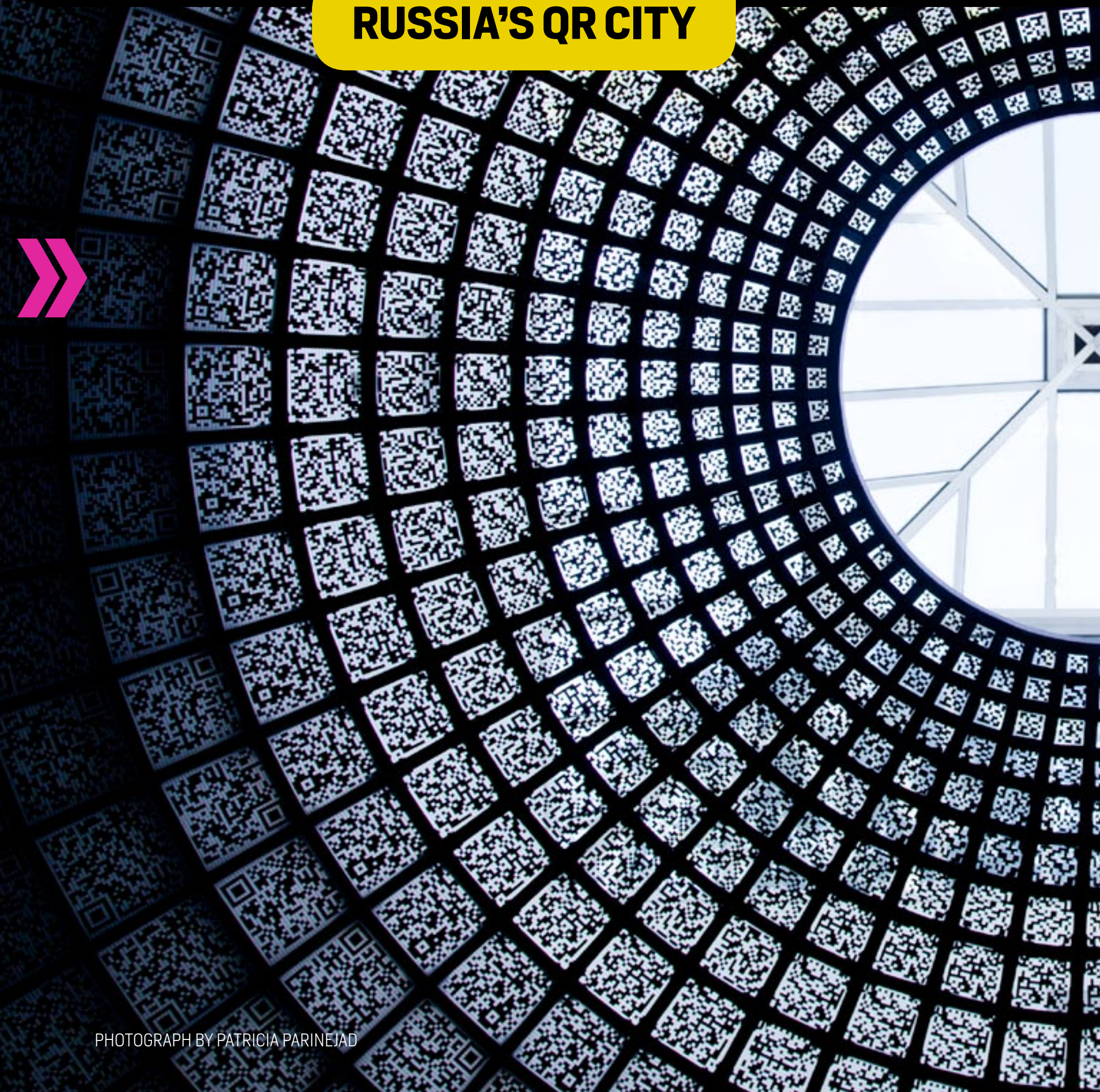
HAIER'S EYE-CONTROL TV

SAMSUNG DUAL-DISPLAY LAPTOP

ESC

DISTRO
09.07.12

RUSSIA'S QR CITY



PHOTOGRAPH BY PATRICIA PARINEJAD

VISUALIZED

JONATHAN PICKING

MEME MAKER MR. WEEBL (aka Jonathan Picking) dismounts his 'Amazing Horse' to ask: "Disco-what?"

What gadget do you depend on most?
Does a PC with a ton of grunt count? Because if so then it's that. I seriously couldn't get much done without that. It's liquid cooled and hooked up to pretty much everything else in my shed. It's not a pretty thing but it does the job. If I had to choose something a bit smaller then I'd have to rather boringly say, my iPhone 4S. It's totally changed my toilet visits.

Which do you look back upon most fondly?
I've still got a huge soft spot for the Dreamcast, a mighty fine console that was killed off before its time. I've never really forgiven Sony for the way they muscled Sega out of the market. *Soul Caliber* was vastly superior on the DC and lets not forget *Jet Set Radio* and *Samba De Amigo*.

Which company does the most to push the industry?
I don't know, but everyone needs to stop being such a bunch of tossers, fighting over patents and just get on with making more cool stuff. It's idiotic and needs to stop.

What is your operating system of choice?
Windows. I don't care if my PC looks like it's made of a magically hewn slate of obsidian. I just want something that craps out frames by the dozen and lets me do what I need, when I need it. Win 7 is stable and has everything I need. Apple is fine but not for me.

What are your favorite gadget names?
I like gadgets with proper names

"I just want something that craps out frames by the dozen and lets me do what I need, when I need it."

rather than numbers and letters. It shows a bit of love has gone into them, don't you think? Names like "Vortex" and "Tenori-On." That said, I also own a Pacemaker MP3 DJ player. That's a terrible name.

What are your least favorite?
"MPK49," "PSM200" — that sort of thing. Come on now. That's just lazy. You could even call your synth something like "Douglas" and it would be better. Man that Douglas sounds fat!

Which app do you depend on most?
Echofon on the iPhone is probably the one I use most, closely followed by Alien Blue. For actual, real applications I spend most of my time using Reason 6.5. Its workflow just lets you get music going so quickly.

What traits do you most deplore in a smartphone?
The lack of Flash. I know Flash is hated on by most out there but since that is what we use to make our animations it's kind of important. The fact I can't check animatics on the fly from my guys is what made me buy an ASUS Transformer. I quite like it. At least I can do actual work on it.

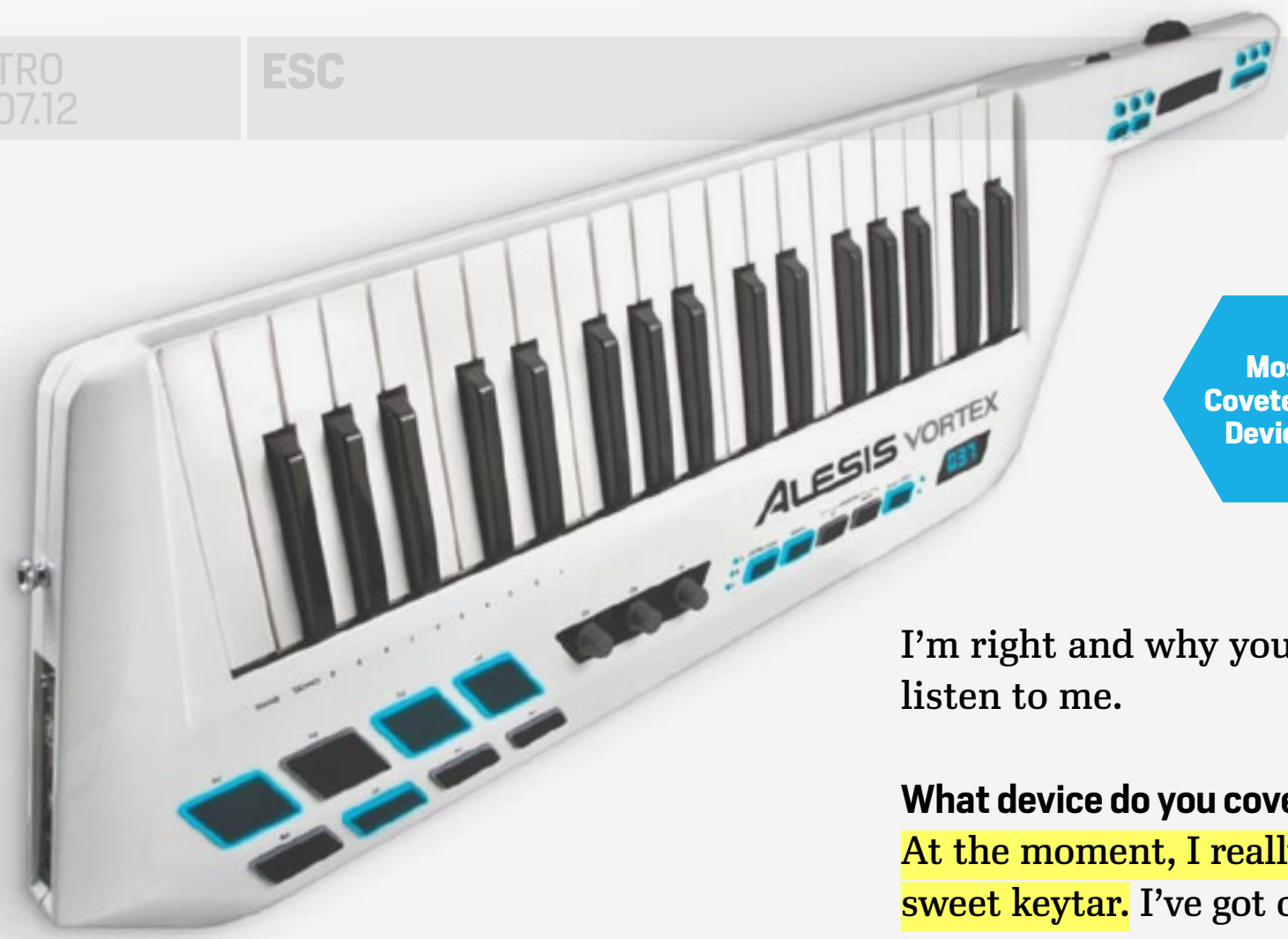
Which do you most admire?
I think smartphones are helping with the growth of indie gaming to a fair extent and that is no bad thing.

What is your idea of the perfect device?
A tablet that has a full-on operating system running all the programs I need, while not being a ball-ache to use. Surface looks interesting but I'm not convinced the interface is quite there.

What is your earliest gadget memory?
The Commodore Vic 20. We played *Jelly Monsters* on that for so very, very long.

What technological advancement do you most admire?
I like the way that increasing processing power is democratizing the creative world. It's getting cheaper to make something that looks fantastically professional and that will hopefully encourage people to really push the boat out creatively. No more bloody vlogs about how good you are at *COD* and more inventive sketches and short films would be heaven.

Which do you most despise?



Most Coveted Device

Apps stores. I know this might seem to go against what I said about indie gaming earlier, but they are putting barriers in the way of those that can't necessarily afford the entrance fee. Very few apps break even I'm sure.

What fault are you most tolerant of in a gadget?
Scuff marks and small chips. A little wear and tear is fine. Just not on the screen.

Which are you most intolerant of?
Remember when you could send MP3 files to each other from phone to phone via Bluetooth or even infrared? I miss that.

When has your smartphone been of the most help?
Usually in arguments about why I'm right and why you should listen to me.

What device do you covet most?
At the moment, I really want a sweet keytar. I've got one on order but it's not going to arrive in time for my first live gig in 10 years.

If you could change one thing about your phone what would it be?
GIMME FLASH ZOMBIE STEVE JOBS YOU BASTARD!

What does being connected mean to you?
Everything working happily with everything else, letting me access my files, shunt work across to whoever needs it and letting me communicate with who I need to with the minimum fuss.

When are you least likely to reply to an email?
When it has no subject. My spam filter automatically rejects it.

When did you last disconnect?
Disco-what? D

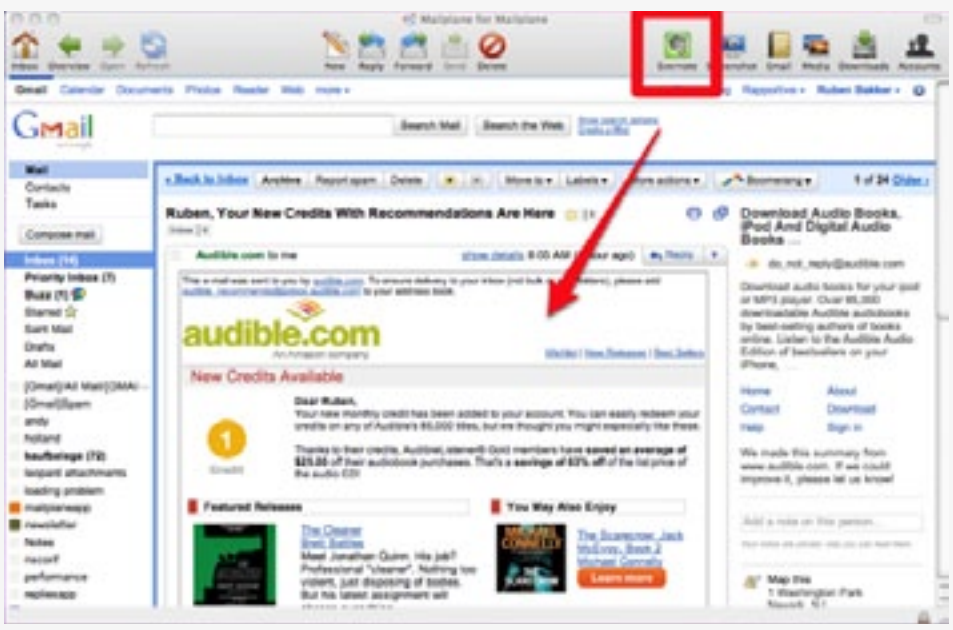
IN REAL LIFE is an ongoing feature where we talk about the gadgets, apps and toys we're using in real life.

MAILPLANE

New iPad with Verizon Wireless LTE

Samsung Galaxy S Running CM9

EVER HEARD THAT PHRASE, you don't know what you've got until it's gone? Back in 2009, I tried Mailplane for a grand total of 30 minutes before reverting to old habits — specifically, using the web-based version of Gmail. I've never been much of a fan of standalone email clients. They rarely work well with all of Gmail's subtitles (Send & Archive, anyone?), and frankly, I've become used to seeing the same UI day after day. But after installing Mountain Lion, I began to yearn for something that notified me of mail. I tried Apple's Mail app in order to get Notification Center alerts, but it just strikes me as plain and uninviting. I then recalled having a license for Mailplane, and realized that there was a v2.5.7 preview.



I adore this build's menu bar addition, which gives you a handy unread count right alongside your Evernote, Fantastical and Google Drive icons. That number can be switched to show unread emails in Inbox, Priority Inbox, etc. It also supports Growl notifications, even the older v1.2. With a customizable top pane, you no longer have to reach for most of Gmail's buttons; just set the icons that you want along the top. I found myself longing for a "Send & Archive" button as well as a button that Moves to a specific label, but hopefully those features will be coming soon.

This is an absolutely beautiful standalone email app for hardcore Gmail users. For $24.99, though, I do expect some changes. For one, you should be able to customize what happens when you click a Growl notification; as is, it opens a new window and tries to log you in again. I just want it to open the message in the main window, or at least have the option. If you aren't sure if it's for you, hit the app's website and download a free edition before paying. I've found it worthwhile, but I use Gmail more than any human ever should. — *Darren Murph*

NEW IPAD WITH VERIZON WIRELESS LTE

Mailplane

Samsung Galaxy S Running CM9

AS WE'RE ALL WELL aware of by now, Cupertino's new iPad's been an unquestionable hit amongst all types of earthlings — not to say that's a surprise, given its first two followed a similarly successful path. The point is this: I snagged one for myself shortly after its official announcement back at the Yerba Buena Center and, all told, I don't regret the $629 I splurged one bit.

Naturally, what drove me to leave my iPad 2 behind and dive in to Apple's newest pad on the block was that long-rumored Retina display, which, to be honest, made all other onboard features seem like — for lack of a better analogy — icing on the cake. Still, that gorgeous 2,048 x 1,536 screen wasn't the only thing I was looking forward to, with those glorifying Verizon LTE speeds also accounting for a big part of my decision — a first for me, since I went the WiFi-only route with the first- and second-generation iPads.

So, some five months after its dazzling unveiling, is there anything I would change about "the new" iPad? Not really. I use it on a daily basis to catch up on the worldwide happenings for the day via Flipboard, occasionally pretend I'm a good driver on *Real Racing 2 HD* and read through people's musings on Twitter. And the iPad handles all of that smoothly — making it the perfect companion to my Jelly Bean-coated Galaxy Nexus. And when it's not doing any of those things, well, let's just say it's the best Big Red hotspot I've ever used. — *Edgar Alvarez*

Mailplane

SAMSUNG GALAXY S RUNNING CM9

WHILE IT'S A BIT undignified for an Engadget editor to be packing an old Samsung Galaxy S, it does open up opportunities for experimentation. Since Samsung stopped the official Android love with its Gingerbread 2.3.6 "value pack," it fell on modders to bring the ICS goodies. So I embarked on an upgrade trek for my European i9000 with CyanogenMod to bring my aging device into the ICS age.

New iPad with Verizon Wireless LTE

Before upgrading, I fully backed up the device to avoid the loss of irreplaceable media and bricking my phone. Then, I downloaded the mod, praying that my screen wouldn't display any sinister messages. After a hitch where the phone went into a continuous reboot loop, I was relieved to finally see CM9's creepy mascot, Cid, indicating a successful install.

Though the tedious and risky procedure would likely discourage most casual users, the payoff was huge. With Samsung's comments about an "unsatisfactory user experience" with Android 4.0, I feared it would overwhelm my poor old phone and its single-core processor. But compared to my previous TouchWiz 2.3.6 Froyo version, the CM9 ICS flavor looks better, runs faster and brings a much better app experience. It feels like a new phone, and now I'm using it again instead of scanning carrier sites for deals on a newer model. All the functions work without any issues, and there's little to no lag when using it. The only drawback I've noticed is a drop in sound quality for music and videos, but the CyanogenMod group still deserves all the kudos I can muster.

It seems this old 4-inch phone has enough zip to easily run Android 4.0 without Samsung's TouchWiz skin (crust?), showing another reason why many critics are cold to it. — *Steve Dent*

The week that was
in 140 characters or less.

NOKIA, MOTOROLA AND THAT GUY WHO LOOKS LIKE DARRELL HAMMOND

@stevenlevy
Basically Google intro'ed and maybe tweaked in-the-works next-gen Motorola phones. Fully expect disruption in 2013. Why else buy it?

@strngwys
Event standing is as follows: 1. Nokia with awesome looking phones that'll arrive eventually 2. Motorola with phones that have an old OS.

@maryjofoley
The tablet question: Elop: We have not anncd plans to do any Win tablet or on any other platform. But looking at this very closely #boohiss

@danawollman

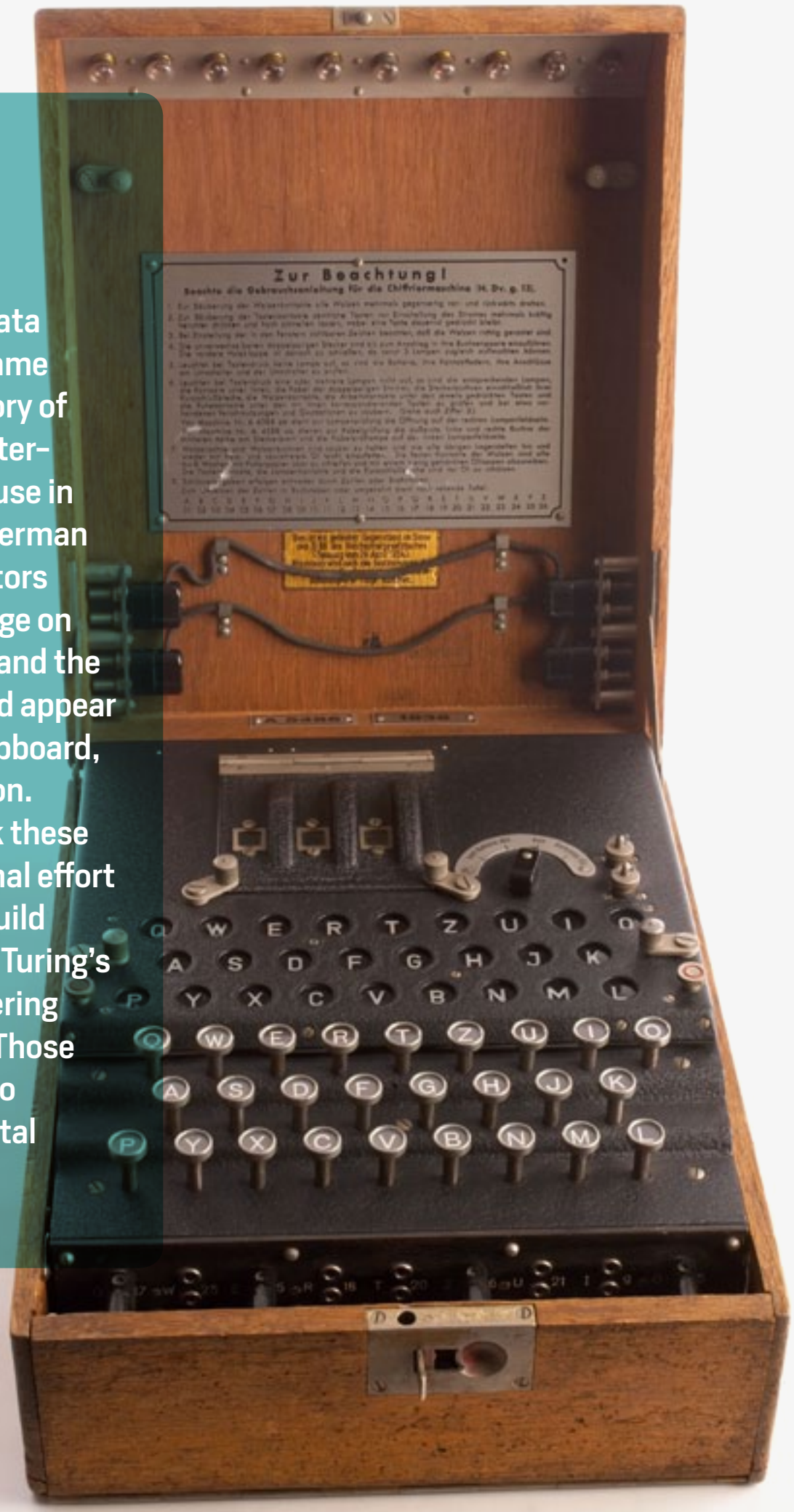
My favorite tech journalist in the whole world is here. The one who looks like Darrell Hammond as Sean Connery.

@thatmatsmith

I think Stephen Elop is coated in Gorilla Glass. Deflecting at its best.

THE STRIP | BY BOX BROWN

ENIGMA



The Enigma, an electromechanical data encryption tool, became entwined in the history of computing and counter-intelligence with its use in World War II by the German armed forces. Operators would input a message on typewriter-like keys and the final ciphertext would appear illuminated on a lampboard, ready for transcription. Endeavoring to break these codes, an international effort was undertaken to build tools — such as Alan Turing's Bombe — for deciphering the encrypted data. Those tools ultimately led to developments in digital computing.

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